

ORDER FOR SUPPLIES OR SERVICES

PAGE OF PAGES

1

34

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER 09/25/2019		2. CONTRACT NO. (If any) 68HE0H18D0009		6. SHIP TO:	
3. ORDER NO. 68HERH19F0400		4. REQUISITION/REFERENCE NO. PR-OCSP-19-00263		a. NAME OF CONSIGNEE HPOD	
5. ISSUING OFFICE (Address correspondence to) HPOD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460				b. STREET ADDRESS US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R	
				c. CITY Washington	e. ZIP CODE 20460
7. TO: Brian Panoff				f. SHIP VIA	
a. NAME OF CONTRACTOR BATTELLE MEMORIAL INSTITUTE				8. TYPE OF ORDER	
b. COMPANY NAME				<input type="checkbox"/> a. PURCHASE <input checked="" type="checkbox"/> b. DELIVERY	
c. STREET ADDRESS 505 KING AVE				REFERENCE YOUR: Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.	
d. CITY COLUMBUS		e. STATE OH	f. ZIP CODE 432012693	Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.	
9. ACCOUNTING AND APPROPRIATION DATA See Schedule				10. REQUISITIONING OFFICE	

11. BUSINESS CLASSIFICATION (Check appropriate box(es))				12. F.O.B. POINT	
<input type="checkbox"/> a. SMALL <input checked="" type="checkbox"/> b. OTHER THAN SMALL <input type="checkbox"/> c. DISADVANTAGED <input type="checkbox"/> d. WOMEN-OWNED <input type="checkbox"/> e. HUBZone <input type="checkbox"/> f. SERVICE-DISABLED VETERAN-OWNED <input type="checkbox"/> g. WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOSB PROGRAM <input type="checkbox"/> h. EDWOSB					
13. PLACE OF		14. GOVERNMENT B/L NO.		15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)	
a. INSPECTION Destination	b. ACCEPTANCE Destination				

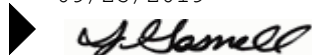
17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	DUNS Number: 007901598 This Task Order is for severable services pertaining to the Endocrine Disruptor Screening Program TOCOR: Smatten Max Expire Date: 09/27/2023 Invoice Approver: Sharlene Matten Continued ...					

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.		17(h) TOTAL (Cont. pages)
	21. MAIL INVOICE TO:						
	a. NAME RTP Finance Center						\$3,586,796.00
	b. STREET ADDRESS (or P.O. Box) US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts						
c. CITY Durham				d. STATE NC	e. ZIP CODE 27711	\$854,197.00	17(i) GRAND TOTAL

22. UNITED STATES OF AMERICA BY (Signature)

09/25/2019



ELECTRONIC SIGNATURE

23. NAME (Typed)
Jody Gosnell
TITLE: CONTRACTING/ORDERING OFFICER

ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION

PAGE NO
2

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER 09/25/2019	CONTRACT NO. 68HE0H18D0009	ORDER NO. 68HERH19F0400
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ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
0001	<p>Admin Office: HPOD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460</p> <p>Accounting Info: 18-19-B-C2A00EA-000C54-2505-19C20SE008-001 BFY: 18 EFY: 19 Fund: B Budget Org: C2A00EA Program (PRC): 000C54 Budget (BOC): 2505 DCN - Line ID: 19C20SE008-001 Period of Performance: 09/25/2019 to 09/24/2023</p> <p>BASE YEAR: ENDOCRINE DISRUPTOR SCREENING PROGRAM TECHNICAL AND SUPPORT SERVICES: in accordance with the Performance Work Statement.</p> <p>TASK 1 - MGMT REPORT TASK 2 - QAPP TASK 3 - DATA ANALYSIS TASK 4.1 - FSTRA TASK 4.2 - AMA TASK 4.3 - PUBLICATION TASK 4.4 - TEMPLATES</p> <p>P.O.P: 9/25/2019 - 9/24/2020</p>				617,436.00	
0002	<p>OPTION YEAR 1: ENDOCRINE DISRUPTOR SCREENING PROGRAM TECHNICAL AND SUPPORT SERVICES: in accordance with the Performance Work Statement.</p> <p>TASK 1 - MGMT REPORT TASK 2 - QAPP TASK 3 - DATA ANALYSIS TASK 4.1 - FSTRA TASK 4.2 - AMA TASK 4.3 - PUBLICATION TASK 4.4 - TEMPLATES</p> <p>P.O.P: 9/25/2020 - 9/24/2021 Continued ...</p>				637,083.00	

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$1,254,519.00

ORDER FOR SUPPLIES OR SERVICES

PAGE NO

SCHEDULE - CONTINUATION

3

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.	ORDER NO.
09/25/2019	68HE0H18D0009	68HERH19F0400

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	(Option Line Item)					
0003	OPTION YEAR 2: ENDOCRINE DISRUPTOR SCREENING PROGRAM TECHNICAL AND SUPPORT SERVICES: in accordance with the Performance Work Statement. TASK 1 - MGMT REPORT TASK 2 - QAPP TASK 3 - DATA ANALYSIS TASK 4.1 - FSTRA TASK 4.2 - AMA TASK 4.3 - PUBLICATION TASK 4.4 - TEMPLATES P.O.P: 9/25/2021 - 9/24/2022 (Option Line Item)				659,554.00	
0004	OPTION YEAR 3: ENDOCRINE DISRUPTOR SCREENING PROGRAM TECHNICAL AND SUPPORT SERVICES: in accordance with the Performance Work Statement. TASK 1 - MGMT REPORT TASK 2 - QAPP TASK 3 - DATA ANALYSIS TASK 4.1 - FSTRA TASK 4.2 - AMA TASK 4.3 - PUBLICATION TASK 4.4 - TEMPLATES P.O.P: 9/25/2022 - 9/24/2023 (Option Line Item)				679,388.00	
0005	TASK 4.1 QUAL EVAL (BASE) P.O.P: 9/25/2019 - 9/24/2020				4,558.00	
0006	Task 4.1 EVD INT (Base) P.O.P 9/25/2019 - 9/24/2020 Continued ...				2,453.00	

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$1,345,953.00

ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION

PAGE NO
4

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER 09/25/2019	CONTRACT NO. 68HE0H18D0009	ORDER NO. 68HERH19F0400
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ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
0007	Task 4.2 QUAL EVAL (Base) P.O.P: 9/25/2019 - 9/24/2020				4,558.00	
0008	Task 4.2 EVD INT (BASE) P.O.P: 09/25/2019 - 09/24/2020				2,453.00	
0009	Task 4.3 OUAL EVAL (BASE) P.O.P: 9/25/2019 - 9/24/2020					
0010	Task 4.3 EVD INT (BASE) P.O.P: 9/25/2019 - 9/24/2020					
0011	Task 4.5 AROMA (BASE) P.O.P: 9/25/2019 - 9/24/2020				218,161.00	
0012	TASK 4.1 QUAL EVAL (OY1) P.O.P: 9/25/2020 - 9/24/2021 (Option Line Item)				4,697.00	
0013	Task 4.1 EVD INT (OY1) P.O.P 9/25/2020 - 9/24/2021 (Option Line Item)				2,530.00	
0014	Task 4.2 QUAL EVAL (OY1) P.O.P: 9/25/2020 - 9/24/2021 (Option Line Item)				4,697.00	
0015	Task 4.2 EVD INT (OY1) P.O.P: 09/25/2020 - 09/24/2021 (Option Line Item)				2,530.00	
0016	Task 4.3 OUAL EVAL (OY1) P.O.P: 9/25/2020 - 9/24/2021 (Option Line Item)				3,040.00	
	Continued ...					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$242,666.00

ORDER FOR SUPPLIES OR SERVICES

SCHEDULE - CONTINUATION

PAGE NO
5

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER 09/25/2019	CONTRACT NO. 68HE0H18D0009	ORDER NO. 68HERH19F0400
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ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
0017	Task 4.3 EVD INT (OY1) P.O.P: 9/25/2020 - 9/24/2021 (Option Line Item)				1,703.00	
0018	Task 4.5 AROMA (OY1) P.O.P: 9/25/2020 - 9/24/2021 (Option Line Item)				225,815.00	
0019	TASK 4.1 QUAL EVAL (OY2) P.O.P: 9/25/2021 - 9/24/2022 (Option Line Item)				4,843.00	
0020	Task 4.1 EVD INT (OY2) P.O.P 9/25/2021 - 9/24/2022 (Option Line Item)				2,610.00	
0021	Task 4.2 QUAL EVAL (OY2) P.O.P: 9/25/2021 - 9/24/2022 (Option Line Item)				4,843.00	
0022	Task 4.2 EVD INT (OY2) P.O.P: 09/25/2021 - 09/24/2022 (Option Line Item)				2,610.00	
0023	Task 4.3 OUAL EVAL (OY2) P.O.P: 9/25/2021 - 9/24/2022 (Option Line Item)				3,153.00	
0024	Task 4.3 EVD INT (OY2) P.O.P: 9/25/2021 - 9/24/2022 (Option Line Item)				1,765.00	
0025	Task 4.5 AROMA (OY2) P.O.P: 9/25/2021 - 9/24/2022 (Option Line Item)				234,289.00	
0026	TASK 4.1 QUAL EVAL (OY3) Continued ...				4,980.00	

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$486,611.00

ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION

PAGE NO
6

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER 09/25/2019	CONTRACT NO. 68HE0H18D0009	ORDER NO. 68HERH19F0400
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ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	P.O.P: 9/25/2022 - 9/24/2023 (Option Line Item)					
0027	Task 4.1 EVD INT (OY3) P.O.P 9/25/2022 - 9/24/2023 (Option Line Item)				2,685.00	
0028	Task 4.2 QUAL EVAL (OY3) P.O.P: 9/25/2022 - 9/24/2023 (Option Line Item)				4,980.00	
0029	Task 4.2 EVD INT (OY3) P.O.P: 09/25/2022 - 09/24/2023 (Option Line Item)				2,685.00	
0030	Task 4.3 OUAL EVAL (OY3) P.O.P: 9/25/2022 - 9/24/2023 (Option Line Item)				3,252.00	
0031	Task 4.3 EVD INT (OY3) P.O.P: 9/25/2022 - 9/24/2023 (Option Line Item)				1,822.00	
0032	Task 4.5 AROMA (OY3) P.O.P: 9/25/2022 - 9/24/2023 (Option Line Item)				241,623.00	

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$257,047.00



ENVIRONMENTAL PROTECTION AGENCY

EPA Office of Science and Coordination Policy:

Technical Support for Data

Analysis/Management and Linear Systematic

Literature Reviews for EDSP

Task Order 2

Request for Task Order Proposal (RFTOP)

EPA Office of Science and Coordination Policy: *Technical Support for Data Analysis/Management and Linear Systematic Literature Reviews for EDSP*

1 PERFORMANCE WORK STATEMENT (PWS)

1.1 PURPOSE

The purpose of this task order (TO), **EPA Office of Science and Coordination Policy: *Technical Support for Data Analysis and Linear Systematic Literature Reviews for EDSP***, will provide technical support to the Office of Science Coordination and Policy (OSCP), Office of Chemical Safety & Pollution Prevention (OCSPP) in two (2) general areas:

1. Data Analysis and Management
2. Linear Systematic Literature Reviews for EDSP

1.2 BACKGROUND

The Office of Science and Coordination Policy (OSCP) manages EPA's Endocrine Disruptor Screening Program (EDSP) and two federal advisory committees, FIFRA Scientific Advisory Panel and the TSCA Science Advisory Committee on Chemicals.

The Endocrine Disruptor Screening Program (EDSP) was established in 1998 under authorities contained in the 1996 *Food Quality Protection Act* (FQPA) and the 1996 *Safe Drinking Water Act* (SDWA) amendments. As mandated by these statutes, the EDSP develops a screening program to determine whether certain substances may have endocrine activity in humans and wildlife. The US EPA has developed a two-tiered approach for screening chemicals and pesticides. The Tier 1 battery is used to identify substances that have potential to interact with the estrogen, androgen or thyroid hormone pathways. The Tier 2 tests identify and establish dose response information for adverse effects for substances identified in the Tier 1 screening. Beginning in 2015, the EDSP is incorporating ToxCast high throughput screening data and computational models in the prioritization and screening of a chemical's potential to interact with the endocrine system in humans and wildlife for a portion of the Tier 1 battery. This approach will allow nearly 20 times the current number of screenings to be performed while dramatically reducing animal testing, allowing the Agency to meet its goals with a relatively level budget.

The EPA's EDSP is continuing the development and validation of alternative testing methodologies (i.e., high throughput assays and computational tools) to prioritize and screen chemicals based on potential endocrine bioactivity and exposure--in particular, the estrogen, androgen, or thyroid hormone pathways in humans and wildlife. This increased use of alternative testing methodologies will improve the output of screening results, allowing for greater biological coverage of the endocrine system.

1.3 TASK 1: TASK ORDER MANAGEMENT AND REPORTING REQUIREMENTS

- 1.3.1 The Contractor shall schedule a kick-off meeting/conference call with the TOCOR within 10 business days following the TO award. The TOCOR, Alternate (Alt) TOCOR, contract-level COR, and the EPA Contracting Officer (CO) must be invited to the kick-off meeting. Additional participants may be included.
- 1.3.2 The Contractor shall manage all aspects of the task order including, but not limited to, the technical, quality assurance, schedule, cost, and communication requirements.
- 1.3.3 The Contractor shall only work on tasks in the Performance Work Statement as directed by the TOCOR. The TOCOR shall identify specific due dates for deliverables for Tasks 3-4 via technical direction. Technical direction will be provided in writing by the Contracting Officer or the TOCOR as delegated by the Contracting Officer.
- 1.3.4 The Contractor shall schedule at least biweekly meetings (teleconference, in-person, Skype, Adobe Connect, or other media) with the TOCOR to discuss the status of the work including reporting any issues with respect to schedule slip or cost overruns. The TOCOR will identify, as needed, other individuals who should participate in these calls. Additional teleconference calls may be scheduled by the TOCOR as needed. Note: Telephone or in-person reports are not replacements for required written communications.
- 1.3.5 In addition to biweekly meetings, the Contractor shall update the TOCOR via telephone (and follow-up via e-mail) and, in writing, via e-mail, of any issues on an ongoing basis.
- 1.3.6 The Contractor shall immediately inform the TOCOR when any hours or costs for any task has exceeded or is expected to exceed the contractor estimate by >10%.
- 1.3.7 The Contractor shall immediately inform the TOCOR of any problems that may impact the production, budget, and/or delivery of deliverables.
- 1.3.8 The Contractor shall notify the TOCOR when 75% of the Government approved hours or approved LH (labor hour) costs have been incurred (including unbilled hours and costs).
- 1.3.9 The Contractor shall provide a monthly progress report of the combined monthly technical and financial progress report) stating the progress made, including the percentage of the project completed, a description of the work accomplished to support the cost, the estimated percentage of task completed (including deliverables) during the reporting period. The **Executive Summary shall summarize the planned and actual work for the month, financial status, work planned for the next month, and significant issues, risks, or concerns. The monthly report shall also provide cost and technical progress data for each of the defined tasks (by labor category for each task) and projected costs for the upcoming reporting period.**
 - For the technical progress report also include the following specific information:
 - Narrative detail review of accomplishments during the reporting period and/or significant events, as well as an assessment of work being completed on schedule and budget.
 - Status of all ongoing activities in accordance with the technical proposal and technical directives.
 - List of deliverables with delivery dates (planned versus actual).
 - Anticipated activities and deliverables for the next reporting period.
 - Specific discussions shall include difficulties encountered and remedial action taken during the reporting period, and anticipated activity with a schedule of deliverables for the subsequent reporting period.

- List of current contractors / staffing roster and any changes that may impact deliverables in advance of the reporting period (e.g., change in personnel and vacations).
 - Monthly Contractor performance information (performance metrics).
- For the financial report, include the following information:
 - Identification of cost issues or concerns.
 - For the current period, display the amount claimed.
 - For the cumulative period display the total amount claimed; amount paid; amount suspended or disallowed; and remaining amount.
 - Labor hours.
 - (i) A list of employees, their labor categories, and the number of hours worked for the reporting period.
 - (ii) For the current reporting period display the expended direct labor hours (by EPA contract labor category), and the total loaded direct labor hours.
 - (iii) For the cumulative reporting period and the cumulative contract period display: The negotiated and expended direct labor hours (by EPA labor hour category) and the loaded direct labor rate.
 - (iv) Display the estimated direct labor hours and costs to be expended during the next reporting period.
 - (v) Display the estimates of remaining direct labor hours and costs required to complete the task order.
 - Unbilled allowable costs. Display the total costs incurred but unbilled for the current reporting period and cumulative for the task order.
 - Average total cost labor hour. For the current contract period, compare the actual total cost per hour to date with the average total cost per hour of the approved technical proposal for the task order.
 - The monthly report does not change the notification requirements of the “Limitation of Cost” or “Limitation of Funds” clauses requiring separate written notice to the Contracting Officer.
- 1.3.10 The Contractor shall maintain a cumulative record of all communications between the contractor and EPA (all media including e-mail and telephone calls) and provide it to the TOCOR within one month after the TO has ended.
- 1.3.11 The contractor shall provide all deliverables in an electronic format specified by the EPA TOCOR (e.g., Word, Excel, Access, HTML) via electronic mail. The Contractor shall format any deliverables intended for posting on an EPA public website to comply with Section 508.
- 1.3.12 Unless otherwise specified by the TOCOR, the Contractor shall provide a secure method for internet transfer of large files.
- 1.3.13 All deliverables for this task order are the property of EPA.
- 1.3.14 Contractor personnel shall identify themselves as contractor employees and shall not present themselves as EPA employees. Furthermore, they shall not represent view of the U.S. Government, EPA, or its employees. In addition, the contractor shall not engage in inherently governmental activities, including, but not limited to actual determination of EPA policy and preparation of documents on EPA letterhead other than routine correspondences.

1.4 TASK 2. QUALITY ASSURANCE AND QUALITY ASSURANCE PROJECT PLAN (QAPP)

The Contractor shall implement a quality system that meets ANSI standard E4-2014.

For planning purposes, assume that a Quality Assurance Project Plan (QAPP) will be required for Tasks 3 and 4. The contractor shall create a Quality Assurance Project Plan (QAPP) that documents the planning, implementation, and assessment procedures for quality assurance and quality control activities. The QAPP integrates all the technical and quality aspects of the project to provide a blueprint for obtaining the type and quality of environmental data and information needed for a specific decision or use. The QAPP shall be prepared in accordance with the specifications identified by EPA (found at <https://www.epa.gov/quality/epa-qar-5-epa-requirements-quality-assurance-project-plans>).

The Government will review and return the quality documentation, with comments, and indicating approval or disapproval. If necessary, the contractor shall revise the documentation to address all comments and shall submit the revised documentation to the government for approval.

The Contractor shall not commence work involving environmental data generation or use until the Government has approved the quality documentation.

1.5 TASK 3: DATA ANALYSIS AND MANAGEMENT

The contractor shall provide EPA with technical assistance in data analysis and data management to support the EDSP. EPA may order work that requires a short turn-around time. The Contractor shall use, to the extent possible, open source tools, e.g., R, Python 3, MySQL, PostgreSQL, MongoDB, etc.

The contractor shall provide support for:

1. Data and statistical analysis, e.g., compiling and evaluating *in vitro* and *in vivo* data from multiple sources, preparing or revising reports, statistical support and data analysis for publication, preparing data evaluation records using EPA study profile templates for the EDSP, *etc.*
2. Data management related to specific data/statistical analyses.
3. Support collecting, prioritizing, and analyzing *in vitro* and *in vivo* data for display on the EPA [CompTox Chemicals Dashboard](#) via systematic review (SR) and high-throughput assays (in vitro only).
4. Data analysis using publicly available models, e.g., PBTK 1-compartment model.
5. The Contractor shall support the data (including data cleaning), statistical (such as meta-analysis of studies), toxicological, and textual analysis (such as text mining and natural language processing analysis) for EDSP systematic reviews.

Examples include:

1. Development of EPA Data Evaluation Records from EPA-sponsored laboratory studies including supporting statistical analysis, as needed.
2. Statistical analysis of EPA data either for an individual study or multiple studies.
3. Meta-analysis of collected data from EPA or published *in vitro/in vivo* studies.
4. Rao-Scott Cochran-Armitage by Slices trend test (**RSCABS**) used in analysis of histopathological endpoints.
5. Data and statistical analysis of EPA toxicokinetics data.
6. Cross-species analyses.
7. *In vitro* to *in vivo* extrapolation using publicly available models, e.g., use of 1-compartment PBTK model.
8. Analysis of *in vitro* toxicokinetics data in trout, rat, and human.

In response to the RFO, the contractor should base the labor hour quote for data analysis and management on the following:

1. Statistical analysis for an individual assay. Assume that cost estimates are based on the number of endpoints per assay to be analyzed, depending on the assay and the protocol. These are assumed to be the customary in-life and biological endpoints, such as survival, growth, reproduction, and biochemistry. Statistical analysis of histopathology data using RSCABs may also be included.
2. Development of EPA Data Evaluation Records from EPA-sponsored laboratory studies including supporting statistical analysis, as needed. Cost estimates are based on the use of EPA Study Evaluation Templates (e.g., OCSPP 890 test guideline series).
3. One (1) meta-analysis of collected data from EPA or published *in vitro/in vivo* studies per year (for cost purposes).
4. Data management using IUCLID or other templates.
5. Data analysis using published PBTK models or QSARs (as examples).

1.6 TASK 4: SUPPORT EDSP LINEAR SYSTEMATIC LITERATURE REVIEWS

The Contractor shall provide technical support for EDSP linear systematic literature reviews. The primary purpose of these systematic literature reviews is to identify *in vivo* reference chemicals from EDSP Tier 1 test guideline (TG) or guideline-like *in vivo* studies that can be used in the performance validation of new alternative methods (NAMs), e.g., high throughput (HT) assays and computational models, for the estrogen, androgen, and thyroid pathways and/or to map available scientific literature on EDSP-relevant *in vivo* or *in vitro* studies. EPA is working toward using HT assays and models as alternatives to the current *in vitro* and *in vivo* assays in the EDSP's Tier 1 & 2 assays. Other study designs such as the [thyroid comparative assay](#) or those identified in [OECD Guidance Document 150](#) may also be of interest to the EDSP.

Specifically, the Contractor shall support the EPA with scientific expertise to perform title/abstract screening, full-text screening, data extraction, other annotations, template development, study quality evaluation, and evidence integration as directed by EPA on Tier 1 and Tier 2 assays and other relevant assays including, but not limited to the Fish Short-Term Reproduction Assay (FSTRA) in three model fish species (*Pimephales promelas*, *Danio rerio*, *Oryzias latipes*) (OCSPP 890.1350/OECD TG 229), Male and Female Pubertal Assays (OCSPP 890.1450 and OCSPP 890.1500, respectively), and Amphibian Metamorphosis Assay (AMA) (OCSPP 890.1100/OECD 230).

EPA may also perform systematic literature reviews or evidence-mapping for other studies similar to the EPA's EDSP Tier 1, Tier 2, other EPA or OECD guideline studies, or other EPA or scientific standard studies (e.g., [thyroid comparative assay](#), aromatase assay, avian reproduction assay, and rainbow trout assays (*Oncorhynchus mykiss*)).

General requirements for Task 4

1. Assume EPA shall provide the contractor with licenses to use collaborative web-based systematic literature review software to accomplish the tasks (such as DistillerSR). Otherwise, the contractor should use software to which the contractor already has access and licenses or is otherwise open-source and/or free of charge. Assume that EPA shall provide reviewers' access to all PDFs via its HERO system, and that the contractor will not acquire their own copies of articles.
2. Each systematic literature review shall be conducted using at least two (2) senior (P3 or P4) scientific technical experts whose technical background is reviewed and approved by EPA as described in Tasks 4.1, 4.2, 4.3, and 4.5 below. The contractor may identify additional senior level scientific technical experts to complete this task.
3. For each systematic literature review that requires the use of a non-EPA gold standard reviewer, the contractor shall identify a P4 or equivalent to provide authoritative guidance on scientific processes,

results, evaluations, outcomes, and terminology.

4. For each systematic literature review that requires building of templates and workflows for the web-based systematic literature review software, the Contractor shall identify at least one (1) staff member with a background in programming and data management.
5. The contractor shall identify a project manager with a background and experience in managing systematic literature reviews and personnel to coordinate the work of all systematic review team members including the EPA team members assigned to a systematic literature review. The contractor project manager shall
 - Keep the TO COR and Alternate TO COR apprised on all communications back to EPA staff.
 - Regularly report on progress and challenges for each systematic review.
 - Ensure staff availability to accomplish the systematic reviews.
6. The TO COR/alt TO COR shall keep the contracted project manager apprised of EPA scientific staff and roles.
7. The contractor shall use the web-based systematic literature review software as directed by the TO COR to complete the tasks described in this task order and other office suite software as appropriate. EPA shall provide the contractor with licenses to use the web-based systematic literature review software and all instructions to perform the work specified in this task order.
8. EPA shall provide reviewers access to all PDFs via its HERO system¹, and that the contractor will not acquire their own copies of articles.
9. For other software, the contractor should use software to which the contractor already has access and licenses or is otherwise open-source and/or free of charge.
10. Any questions about the templates or bugs encountered in web-based systematic literature review software forms during the review should be forwarded immediately to the EPA TO COR for resolution.

The following steps are required for each systematic literature review in Task 4:

1 Reviewer Calibration Exercises

- a. The contractor shall conduct a reviewer calibration exercise (establish reviewer proficiency and systematic review reproducibility) for all senior level technical experts. If a senior level technical expert has been trained previously by EPA for a step using a web-based form of a systematic review, then this step may not be needed again. Typically, a calibration exercise need only be completed once for each step of a test guideline. Final decision on this will be made by the TO COR.
- b. At least two (2) contractor-selected technical experts and at least one (1) EPA technical expert will independently review the same set of titles/abstracts, articles, and/or DERs using the web-based systematic literature review software.
- c. EPA will compare the contractor and EPA reviews to determine whether reviewer conflicts exist. Any conflicts will be resolved by the contractor and EPA so that consensus is reached.
- d. Once the calibration exercise has been completed, the contractor shall continue with the systematic review steps.

2 Quality Assurance/Quality Control (QA/QC)

a. Blind

A second senior level technical expert will independently (blind) screen or extract 20% of the articles reviewed by the first reviewer, and EPA or the Contractor will conduct an independent discrepancy analysis of the results without discrepancy resolution. If there are more than 5% non-

¹ <https://hero.epa.gov/hero/>

systematic discrepancies or if there are any systematic errors, EPA will evaluate the need for additional QA/QC and order discrepancy resolution or optional quantities via technical directive.

b. Pre-filled

A second senior level technical expert will review results of 20% of the screenings or extractions by the first reviewer, and EPA or the Contractor will conduct an independent discrepancy analysis of the results without discrepancy resolution. If there are more than 5% non-systematic discrepancies or if there are any systematic errors, EPA will evaluate the need for additional QA/QC and order discrepancy resolution or optional quantities via technical directive.

c. Optional Quantities

EPA may order up to 4 optional quantities (up to 100% of the articles) for blind or pre-filled QC via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will QC screen 20% of the reviewed by the first reviewer. EPA or the Contractor will conduct an independent discrepancy analysis of the results to determine whether additional optional quantities are needed.

d. Discrepancy resolution

Senior-level reviewers consult with each other and, as necessary, a project leader or gold standard reviewer, to identify a consensus answer or approach.

e. Gold Standard Reviewer

A gold standard reviewer (may be either an EPA or contract expert as determined by the TO COR) to resolve discrepancies when a consensus answer or approach is not feasible under discrepancy resolution. Gold standard reviewers will participate in reviewer calibration exercises.

f. EPA QC

After each systematic review step, EPA shall sample a subset of articles for QC by EPA experts as determined by the TO COR. Depending on the outcome of this QC, EPA may order additional review via technical directive.

3 Abstract/Title Screening

Using web-based systematic literature review software provided by EPA two or more senior level (P3 or P4) technical experts shall independently review and evaluate titles and abstracts from scientific literature searches to ascertain the potential relevance and utility of these articles to the overall goals of systematic review. EPA may also ask specific questions on articles web-based systematic literature review software.

a. Reviewer Calibration Exercises – Calibration on 25-50 articles together with a gold standard reviewer

b. QA/QC

i. The Project Leader shall implement blind QC with optional quantities and a gold standard reviewer at intervals determined by the TO COR via technical directive

ii. EPA shall QC the results

4 Full-text Screening

Using web-based systematic literature review software provided by EPA one (1) senior level (P3 or P4) technical expert will perform initial full-text screening in the systematic review process. Full-text screening includes characterization of the overall article, identification and evaluation of potentially relevant experiments within an article, methodological extraction (such as chemicals tested, duration, species, etc.). The same technical reviewer does not have to full-text screen all papers.

a. Reviewer Calibration Exercises – Calibration on 10-15 articles together with a gold standard reviewer

- b. QA/QC
 - i. The Project Leader shall implement blind QC with optional quantities (either blind or pre-filled as determined by the TO COR) at intervals determined by the TO COR via technical directive
 - ii. A gold standard reviewer will be determined as necessary by the EPA TO COR
 - iii. EPA shall QC the results

5 Data extraction

Using web-based systematic literature review software provided by EPA one (1) senior level (P3 or P4) technical expert will extract all relevant data from potentially relevant experiments identified in the full-text screening process into pre-defined forms. The same technical reviewer does not have to extract data from all papers.

- a. Reviewer Calibration Exercises – Calibration on 2-3 articles together with a gold standard reviewer
- b. QA/QC
 - i. The Project Leader shall implement blind QC with optional quantities (either blind or pre-filled as determined by the TO COR) and at intervals determined by the TO COR via technical directive
 - ii. A gold standard reviewer will be determined as necessary by the EPA TO COR
 - iii. EPA shall QC the results

6 Study Quality Evaluation

Using web-based systematic literature review software provided by EPA one (1) senior level (P3 or P4) technical expert will evaluate the study reporting & methodological quality and relevance of experiments extracted from studies into pre-defined forms. The same technical reviewer does not have to evaluate study quality from all papers.

- a. Reviewer Calibration Exercises – Calibration on 2-3 articles together with a gold standard reviewer
- b. QA/QC
 - a. The Project Leader shall implement blind QC with optional quantities (either blind or pre-filled as determined by the TO COR) and at intervals determined by the TO COR via technical directive
 - b. A gold standard reviewer will be determined as necessary by the EPA TO COR
 - c. EPA shall QC the results

7 Evidence Integration

Using web-based systematic literature review and other software provided by EPA one (1) senior level (P3 or P4) technical expert will consider the quality, consistency, relevancy, coherence and biological plausibility to analyze, synthesize and integrate the data/information. It is in this stage where the weight of the scientific evidence approach is applied to evaluate and synthesize multiple evidence streams to support the evaluation. The same technical reviewer does not have to consider all evidence streams.

Application of weight of evidence analysis is an integrative and interpretive process that considers both data/information in favor (e.g., positive study) or against (e.g., negative study) a given hypothesis within the context of the assessment question(s) being evaluated in the risk evaluation.

- a. Reviewer Calibration Exercises – Calibration on 2-3 articles together with a gold standard reviewer
- b. QA/QC
 - The Project Leader shall implement blind QC with optional quantities (either blind or pre-filled as determined by the TO COR) and at intervals determined by the TO COR via

technical directive

- A gold standard reviewer will be determined as necessary by the EPA TO COR
- EPA shall QC the results

Subtask 4.1: Systematic Literature Review - Fish Short-Term Reproduction Assay

The purpose of this subtask is to identify published studies with data that can be used to support the EDSP, for a select set of chemicals provided by the EPA. Relevant literature will cover studies with the potential to be like the EPA's EDSP Tier 1 Fish Short-Term Reproduction Assay (FSTRA; OPPTS 890.1350, Oct. 2009) or the equivalent OECD Test Guideline (OECD TG 229, Sept. 2009). Reference is also made to the study of {Dang, 2011, 1401857}. The studies will be used in the performance-based validation of high throughput (HTP) assays and computational models for the estrogen, androgen, and thyroid pathways. EPA is working toward using HTP assays and models as alternatives to the current *in vitro* and *in vivo* assays in the Endocrine Disruptor Screening Program's Tier 1 battery.

Additionally, EPA seeks to identify potentially relevant scientific literature to characterize cross-species sensitivities to *in vivo* reference chemicals identified potentially relevant to EPA's cross-species study of three model fish species used in the Fish Short-Term Reproduction Assay (OECD test guideline 229). The EPA FSTRA test guideline (OCSPP 890.1350) recommends the use of fathead minnow (*Pimephales promelas*) while the OECD FSTRA test guideline (OECD 229) has been validated for three model fish species: fathead minnow (*P. promelas*), zebrafish (*Danio sp.*), and Japanese medaka (*Oryzae sp.*). The results will be used to further characterize cross-species sensitivities to *in vivo* reference chemicals identified in the fathead minnow (FSTRA model organism).

The contractor shall provide at least **two (2) senior level technical experts (e.g., P3 or P4)** with experience in aquatic toxicity assessment, e.g., EPA or OECD fish chronic and/or lifecycle aquatic toxicity test guideline studies.

1. The reviewers shall conduct full-text screening & data extraction as defined for this Task on articles and data evaluation records identified by EPA.
2. Templates and workflows for full-text screening and data extraction shall identified by EPA specifically for this project in the web-based systematic review literature review software.
3. QA/QC shall be blind, with optional quantities up to 100%. The Contractor may optionally identify a gold standard reviewer as part of the project team

In response to the RFO, the contractor should base the labor hour quote for the systematic review of FSTRA studies on the following assumptions:

1. **Assume two (2) senior level technical experts** (e.g., P3 or P4 equivalent) with experience in aquatic toxicity assessment, e.g., EPA fish chronic and/or lifecycle aquatic toxicity test guideline studies, will perform the work. The contractor may identify additional senior level technical experts to complete the project within the period of performance.
2. **Assume reviewer calibration** using the Distiller™ software **is needed**. Assume that EPA will provide each Contractor senior level technical expert the same set of 5-15 articles to screen the data. One (1) or more EPA technical reviewers will be included in the reviewer calibration exercise.
3. **Full-text Screening**. Assume at least one (1) senior level technical expert will perform the full-text screening on **450 articles** in the systematic review process. Assume full-text screening will average 15-20 minutes/article.
4. **QA/QC (Blind)** – Assume that a second senior level technical expert will independently (blind) screen 20% of the articles reviewed by the first reviewer and that EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
5. **Optional QA/QC (Blind) Quantities** - Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles

reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will independently (blind) screen 20% of the articles reviewed by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

Subtask 4.2: Systematic Literature Review – Amphibian Metamorphosis Assays

The purpose of this subtask is to identify published studies with data that can be used to support the EDSP, for a select set of chemicals provided by the EPA. Relevant literature will cover studies with the potential to be like the EPA's EDSP Tier 1 Amphibian Metamorphosis Assay (Frog) (AMA; OCSPP 890.1100, Oct. 2009) or the equivalent OECD Test Guideline (OECD TG 231, Sept. 2009). Reference is also made to the [Amphibian Metamorphosis Assay OCSPP Guideline 890.1100 Standard Evaluation Procedure \(SEP\)](#) and the modifications for *Silurana tropicalis* outlined in (Mitusui et al., 2006²). The studies will be used in the performance-based validation of high throughput (HTP) assays and computational models for the estrogen, androgen, and thyroid pathways. EPA is working toward using HTP assays and models as alternatives to the current *in vitro* and *in vivo* assays in the Endocrine Disruptor Screening Program's Tier 1 battery.

The contractor shall provide **two (2) senior technical experts**, with experience in ecological and developmental toxicity testing and assessment; EPA's endocrine disruption test guideline studies, e.g., amphibian metamorphosis assay (OPPTS 890.1100); and/or thyroid toxicity testing and the vertebrate HPT axis, to conduct the Amphibian Metamorphosis Assays systematic reviews.

1. The reviewers shall conduct title/abstract screening, full-text screening & data extraction as defined for this Task on articles and data evaluation records identified by EPA.
2. Templates and workflows for title/abstract screening, full-text screening, and data extraction shall be identified by EPA specifically for this project in the web-based systematic review literature review software.
3. QA/QC shall be blind, with optional quantities up to 100%. The Contractor may optionally identify a gold standard reviewer as part of the project team.

In response to the RFO, the contractor should base the labor hour quote for the systematic review of AMA studies on the following assumptions:

1. **Assume two (2) senior level technical experts** (e.g., P3 or P4 equivalent) with experience in vertebrate developmental toxicity assessments, EPA's endocrine disruption test guideline studies (890 series) and/or the amphibian metamorphosis assay developmental toxicity assessments will be needed. The contractor may identify additional senior level technical experts to complete the project within the period of performance.
2. **Assume reviewer calibration** using the Distiller™ software **is needed**. Assume that EPA will provide each Contractor senior level technical expert the same set of 2-3 articles or EPA Data Evaluation Records to extract the data. For abstract/title screening, EPA will provide the Contractor senior level technical expert will be provided the same set of 3-5 articles for abstract/title screening and a set of 3-5 articles for full-text screening.

² Naoko Mitsui, Takaaki Fujii, Maki Miyahara, Tomohiro Oka, Akihiko Kashiwagi, Keiko Kashiwagi, Hideki Hanada, Hiroshi Urushitani, Noriaki Santo, Osamu Tooi, and Taisen Iguchi. 2006. Development of metamorphosis assay using *Silurana tropicalis* for the detection of thyroid system-disrupting chemicals. *Ecotoxicology and Environmental Safety* Volume 64, Issue 3, July 2006, Pages 281-287. <https://doi.org/10.1016/j.ecoenv.2005.07.007>

3. Data extraction of 25 articles.

- Assume one (1) senior level technical expert will independently extract data from twenty-five (25) articles that have been completed full-text screening prior to this task order. Assume that each data extraction will take 1 hour per article.
- Assume that these articles must undergo QA/QC as described above.

4. Data extraction of 47 EPA Data Evaluation Records

- Assume one senior level technical expert will extract the data from all 47 EPA Data Evaluation Records (DERs). Assume that this reviewer will average 30 minutes to extract the data for each DER.
- **QA/QC (Spot-Check)** – Assume that a Contractor senior level technical expert will spot check 20% of the data extractions (DERs) previously completed by EPA reviewers. EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
- **Optional QA/QC (Spot-Check) Quantities** – Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the data extractions (DERs) previously conducted by EPA reviewers. For each optional quantity, a Contractor senior level technical expert will spot check 20% of the data extractions (DERs) completed by EPA. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

5. Screening 515 Articles

- **Abstract/Title Screening.** Assume one (1) senior level technical expert will screen the abstract/titles of all 515 articles. Assume abstract/title screening will take 3-5 minutes per article.
 - ✓ **QA/QC (Blind)** – Assume that a second senior level technical expert will independently (blind) screen 20% of the title/abstracts reviewed by the first reviewer and that EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
 - ✓ **Optional QA/QC (Blind) Quantities** - Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will independently (blind) screen 20% of the title/abstracts screened by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.
- **Full-text Screening.** Assume one (1) senior level technical expert will perform the full-text screening/preamble extraction of 170 articles (~33% of 515 articles). Assume full-text screening will average 15-20 minutes/article.
 - ✓ **QA/QC (Blind)** – Assume that a second senior level technical expert will independently (blind) screen 20% of the articles reviewed by the first reviewer and that EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
 - ✓ **Optional QA/QC (Blind) Quantities** - Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will independently (blind) screen 20% of the articles screened by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

6. **Data Extraction.** Assume one (1) senior level technical expert will perform the data extraction of 20 articles (~10% of 515 articles). Assume data extraction will average 1 hour/article.
- ✓ **QA/QC (Blind)** – Assume that a second senior level technical expert will independently (blind) extract data from 20% of the articles reviewed by the first reviewer and that EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
 - ✓ **Optional QA/QC (Blind) Quantities** - Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will independently (blind) extract the data from 20% of the articles reviewed by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

Subtask 4.3. Systematic Literature Review - Male and Female Pubertal Assays

The purpose of this subtask is to identify published studies with data that can be used to support the EDSP, for a select set of chemicals provided by the EPA. Relevant literature will cover studies with the potential to be like the EPA's EDSP Tier 1 male and female pubertal (OCSPP test guidelines 890.1450 that can be used in the performance-based validation of high throughput (HTP) assays and computational models for the estrogen, androgen, and thyroid pathways. EPA is working toward using HTP assays and models as alternatives to the current *in vitro* and *in vivo* assays in the Endocrine Disruptor Screening Program's Tier 1 battery.

The contractor shall provide at least **two (2) senior technical experts** (e.g., P3 or P4), with experience in mammalian toxicity assessment, e.g., EPA's reproductive, developmental, and/or endocrine disruption test guideline studies, especially vertebrate HPG and HPT axes, shall independently perform the abstract screening, full-text screening and data extraction of each article using the templates provided by TO COR.

1. The reviewers shall conduct title/abstract screening, full-text screening & data extraction as defined for this Task on articles and data evaluation records identified by EPA.
2. Templates and workflows for title/abstract screening, full-text screening, and data extraction shall identified by EPA specifically for this project in the web-based systematic review literature review software.
3. QA/QC shall be blind, with optional quantities up to 100%. The Contractor may optionally identify a gold standard reviewer as part of the project team.

In response to the RFO, the contractor should base the labor hour quote for the systematic review of male and female pubertal studies, the contractor should assume the following:

1. **Two (2) senior level technical experts** (e.g., P3 or P4) with experience in mammalian toxicity assessment, e.g., EPA's reproductive, developmental, and/or endocrine disruption test guideline studies shall independently perform the full-text screening and data extraction of each article using the template provided by EPA.
2. **Assume reviewer calibration** using the Distiller™ software **is needed**. Assume that EPA will provide each Contractor senior level technical expert the same set of 5-15 articles to screen the data. One (1) or more EPA technical reviewers will be included in the reviewer calibration exercise.
3. **Full-text Screening**. Assume one (1) senior level technical expert will perform the full-text screening/preamble extraction of **108** articles. Assume full-text screening will average 15-20 minutes/article.
 - ✓ **QA/QC (Blind)** – Assume that a second senior level technical expert will independently (blind) screen 20% of the articles reviewed by the first reviewer and that EPA will conduct a

discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.

- ✓ **Optional QA/QC (Blind) Quantities** - Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will independently (blind) screen 20% of the articles screened by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

4. **Data Extraction.** Assume one (1) senior level technical expert will perform the data extraction of **30** articles. Assume data extraction will average 1 hour/article.

- ✓ **QA/QC (Blind)** – Assume that a second senior level technical expert will independently (blind) extract data from 20% of the articles reviewed by the first reviewer and that EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
- ✓ **Optional QA/QC (Blind) Quantities** - Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will independently (blind) extract the data from 20% of the articles reviewed by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

Subtask 4.4 Building Linear Systematic Review Screening, Extraction, Evaluation, and Evidence Integration Templates and Workflows.

The purpose of this subtask is to:

- support the development and implementation of linear systematic review title/abstract screening, full-text screening, data extraction, study quality evaluation, and evidence integration templates; and
- support the development of linear reviewer workflows (including QA/QC and calibration) in systematic review tools selected by EPA.

Specifically, the contractor shall:

1. Build systematic review templates in the web-based systematic literature review software chosen by EPA to meet the needs of the QA/QC, calibration, screening, extraction, evaluation, and integration needs of the EPA and Contractor scientific and project management staff associated with an EPA systematic review project;
2. Align the templates with external data formats and controlled vocabularies such as (but not limited to):
 - IUCLID (see for example, https://iuclid6.echa.europa.eu/documents/21812392/22307013/IUCLID+6_2.0.0_format.zip/dca3ad2d-796c-2faa-ec0d-d58cf1deb376)
 - OECD Harmonized Templates (<http://www.oecd.org/ehs/templates/>, including, but not limited to: OHT 48-2 & 75-3)
 - [Unified Medical Language System \(UMLS\)](#)
 - [AOPWiki](#)
 - [Medical Subject Headings](#) (MeSH)
3. Implement the templates in the web-based systematic literature review software chosen by EPA to

facilitate the review by scientific staff associated with a Systematic Review Project under this Task;
and

4. Extract and transform the data from the web-based systematic literature review software chosen by EPA into usable format for further statistical analysis, visualization, and/or storage in a chemical risk assessment/hazard repository such as (but not limited to) [IUCLID](#), [HAWC](#), or [ToxRefDB](#).
- 5.

For each Systematic Review Templates and Workflows Project initiated by technical directive under this subtask, the contractor shall provide at least:

1. One informatics expert with a background in programming in Python or other scripting language and relational database management (such as MySQL or PostgreSQL).
2. One scientific technical expert whose technical background is reviewed and approved by EPA (P2 or P3) whose expertise is relevant to the purposes of the intended systematic review project (such as mammalian or eco-toxicology). This expert shall work with EPA staff and the contractor informatics expert to:
 - translate EPA guidelines, standard evaluation procedures, data evaluation records, scientific literature, and scientific reviewer feedback into meaningful templates and workflows; and
 - map the proposed systematic review template to external formats and controlled vocabularies or ontologies.

The work and approaches of both the informatics and the scientific technical expert shall be reviewed by either a higher-tier expert of comparable expertise of the contractor or by EPA.

In response to the RFO, the contractor should base the labor hour quote for the systematic review of AMA studies on the following assumptions:

Assume that the contractor shall build systematic review full-text screening and data extraction templates and workflows for tasks 4.1, 4.2, and 4.3 in the DistillerSR collaborative tool that integrates information and ontologies from EPA data evaluation records, standard evaluation procedures, data entry spreadsheet templates^{3, 4}, IUCLID 6.3 database format^{5, 6}, OECD Harmonized Templates 48-2⁷ and 75-3⁸, and UMLS terminology⁹. Assume that the templates and workflows should maximize utilization of the available DistillerSR technologies and generate files from DistillerSR that can be easily imported into the IUCLID database system using i6z format.

Subtask 4.5 (OPTIONAL): Systematic Literature Reviews Relevant to the EDSP

The purpose of this optional subtask is to identify published studies with data that can be used to support the EDSP, for a select set of chemicals provided by the EPA. Relevant literature will cover studies with the potential to be similar to the EPA's EDSP Tier 1, Tier 2, other EPA or OECD guideline studies, or other EPA or scientific standard studies (such as the [thyroid comparative assay](#), aromatase assay, avian reproduction assay, and trout toxicity assays). The studies will be used in the performance-based validation of high throughput (HT) assays and

³ See <https://www.epa.gov/endocrine-disruption/standard-evaluation-procedures-seps-and-data-entry-spreadsheet-templates-depts>

⁴ <https://www.epa.gov/endocrine-disruption/endocrine-disruptor-screening-program-tier-1-screening-determinations-and>
⁵ <https://iuclid6.echa.europa.eu/>

⁶ <https://iuclid6.echa.europa.eu/format>

⁷ <http://www.oecd.org/ehs/templates/harmonised-templates-effects-on-biotic-systems.htm>

⁸ <http://www.oecd.org/ehs/templates/harmonised-templates-health-effects.htm>

⁹ <https://uts.nlm.nih.gov/home.html>

computational models for the estrogen, androgen, and thyroid pathways. EPA is working toward using HT assays and models as alternatives to the current in vitro and in vivo assays in the Endocrine Disruptor Screening Program's Tier 1 battery and to support endocrine relevant findings across the Agency.

If this option is exercised, the contractor shall provide at least **two (2) senior technical experts**, with experience relevant to the guideline or study basis under consideration.

If EPA exercises this optional subtask:

1. The reviewers shall conduct title/abstract screening, full-text screening, data extraction, study evaluation, and evidence integration as defined for this Task on articles and data evaluation records identified by EPA via technical direction.
2. Templates and workflows for title/abstract screening, full-text screening, data extraction, study evaluation, and evidence integration shall be identified by EPA via technical direction specifically for this project in the web-based systematic review literature review software.
3. QA/QC shall be blind, with optional quantities up to 100%. The Contractor may optionally identify a gold standard reviewer as part of the project team.

In response to the RFO, the contractor should base the labor hour quote for the systematic review for the Aromatase (Human Recombinant) (OSCPP test guidelines 890.1200) with additional *in vitro* assays measuring aromatase activity that can be used in the performance-based validation of high throughput (HTP) assays and computational models for the estrogen & androgen pathways on the following assumptions:

1. **Assume two (2) senior level technical experts** (e.g. P4 equivalent) with experience in aromatase assays (cell based and cell-free assays) and EPA's endocrine disruption test guideline studies (890 series) will perform the work. The contractor may identify additional senior level technical experts in order to complete the project within the period of performance.
2. **Assume reviewer calibration** using the Distiller™ software **is needed**. One (1) or more EPA technical reviewers will be included in the reviewer calibration exercises.
3. **Abstract/title screening.**
 - Assume a senior level technical expert will independently screen the title/abstract of approximately 1750 articles focusing on the Aromatase (Human Recombinant) (OSCPP test guidelines 890.1200) with additional *in vitro* assays measuring aromatase activity. Assume abstract/title screening will take 3-5 minutes per article.
 - **QA/QC (Blind)** – Assume that a second senior level technical expert will independently (blind) screen 20% of the title/abstracts reviewed by the first reviewer and that EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
 - **Optional QA/QC (Blind) Quantities** - Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will independently (blind) screen 20% of the title/abstracts screened by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

4. **Full text screening**

- **Assume at least one (1) senior level technical reviewer will review 583** articles for full text screening/preamble extraction. Assume full text screening will take 15 minutes/article.
- **QA/QC (Spot-Check)** – Assume that a second senior level technical expert will spot check 20% of the full text screening/preamble extractions performed by the first reviewer and that EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
- **Optional QA/QC (Spot-Check) Quantities** - Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will spot check 20% of the full text screening/preamble extractions performed by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

5. **Data extraction**

- **Assume at least one (1) senior level technical reviewer will review 437** (25% of the 1700 articles) articles for data extraction. Assume data extraction will take 1 hour per article.
- **QA/QC (Blind)** – Assume that a second senior level technical expert will independently (blind) screen 20% of the data extractions performed by the first reviewer and that EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
- **Optional QA/QC (Blind) Quantities** – Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will independently (blind) screen 20% of the full text screening/preamble extractions performed by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

1.7 REPORTING REQUIREMENTS AND DELIVERABLES

The contractor shall provide the following deliverables listed in Table 1.

TABLE 1. DELIVERABLES AND SCHEDULE

Tasks	Deliverables	Due Dates
1	Task management ✓ Kick-off meeting within 2 weeks after the task order has been awarded. ✓ Monthly Progress Report (i.e. Technical/Progress Status Report and Financial Status Report) by the 15 th of each month (following completion of 1 st reporting period). ✓ Biweekly status meetings	

Tasks	Deliverables	Due Dates
	<ul style="list-style-type: none"> ✓ Other meetings as required by the TOCOR ✓ Email a copy to the CO, Contract level COR, TOCOR, and Alt TOCOR ✓ Immediately inform the TOCOR when any hours or costs for any task has exceeded or is expected to exceed the contractor estimate by >10%. ✓ Immediately inform the TOCOR of any problems that may impact the production, budget, and/or delivery of deliverables. ✓ The Contractor shall notify the TOCOR when 75% of the Government approved hours or approved LH costs have been incurred (including unbilled hours and costs). 	
2	EPA Requirements for Quality Assurance Project Plans (QA/R- 5) https://www.epa.gov/quality/epa-qar-5-epa-requirements-quality-assurance-project-plans <ul style="list-style-type: none"> ✓ Draft QAPP ✓ Final QAPP 	<ul style="list-style-type: none"> ✓ Email to Contract-level COR and respective TOCOR and Alt TOCOR ✓ Draft QAPP: submitted with technical proposal ✓ Final QAPP: 7-10 days after receiving comments from EPA TOCOR comments
3	Data Analysis and Statistical Support	TBD by technical directive
4	Linear Pathway Systematic Reviews	TBD by technical directive

1.8 ACCEPTABLE QUALITY LEVEL FOR TASKS

See Attachment 1: Quality Assurance Surveillance Plan

1.9 PERIOD OF PERFORMANCE

The period of performance of this task order is:

- Base: 12 months from award date
- Option 1: 12 months from option exercise
- Option 2: 12 months from option exercise
- Option 3: 12 months from option exercise

1.10 PLACE OF PERFORMANCE

Work may be performed off-site.

1.11 PERSONNEL

The Contractor is responsible for providing personnel with the necessary level expertise to support the task activities and requirement in this PWS.

1.12 TASK ORDER TYPE: TIME & MATERIALS OR FIRM FIXED PRICE

1.13 GOVERNMENT FURNISHED EQUIPMENT (GFE)

In accordance with FAR 45.102, the contractor shall furnish all property required for performing Government contracts. If a contractor believes that Government property is required for performance of the contract, the contractor shall submit a written request to the CO. For cost purposes, assume that EPA shall provide an office phone with voicemail, and e-mail for approved personnel working in OSCP-space to complete work under Task 3 of this task order.

1.14 TRAVEL

The Contractor may be required to travel during the performance of this task order. The Contractor is required to follow the requirements of subpart 31.2 of the FAR regulations in incurring allowable travel costs under this task order, and correspondingly must always seek and obtain government rates whenever available and observe current subsistence ceilings.

1.15 TRAINING

EPA-H-31-105 APPROVAL OF TRAINING [see Section H.22 of the IDIQ contract]

(a) The contractor shall provide and maintain a qualified staff of personnel to meet the requirements of the Performance Work Statement. The contractor shall provide training to keep its personnel abreast of changes to the science and/or technology associated with the requirements of the contract. In addition, the contractor shall ensure that its personnel receive appropriate safety, health and environmental training in accordance with Federal, state and local requirements prior to assigning any task that require such training. The contractor shall provide documentation of such training upon the request of the Contract-Level COR and/or Contracting Officer.

The Government will not directly reimburse the cost for contractor employees to meet or maintain minimal contract requirements or to obtain and sustain an appropriate level of professionalism. Any direct charges for training will only be considered for reimbursement under this contract by compliance with the procedures set forth in paragraph (b) (see Section H.22 of the IDIQ contract).

2 INSPECTION AND ACCEPTANCE

QUALITY ASSURANCE PROJECT PLAN (SEE TASK 2 ABOVE)

The Contractor shall submit a draft QAPP per EPA Requirements for Quality Assurance Project Plans (QA/R-5) (Table 2).

Table 2. Quality Assurance Project Plan

	Documentation	Specifications	Due
X	Quality Assurance Project Plan for the Task Order	EPA Requirements for Quality Assurance Project Plans (QA/R- 5) (dated 3//20/2011) https://www.epa.gov/quality/e-pa-qar-5-epa-requirements-quality-assurance-project-plans	DRAFT: As stated in the RFP for the task order FINAL: 7-10 days following receipt of the TOCOR's comments on the DRAFT QAPP

3 TASK ORDER ADMINISTRATION DATA

3.1 CONTRACT ADMINISTRATION REPRESENTATIVES

- Contracting Officer: Jody Gosnell, Team Leader OAS/HQAD
- Contract Specialist: Eric Ward, OAS/HQAD
- Contract Level Contracting Officer's Representative: Sharlene Matten, OSCP/EACPD
- Task Order Contracting Officer's Representative: Kristan Markey, OSCP/EACPD

3.2 TASK ORDER CLAUSES

INVOICING

Invoices shall be submitted in accordance with contract clause G.3 EPAAR 1552.232-70 SUBMISSION OF INVOICES. (JUN 1996) - ALTERNATE I (JUN 1996).

4.2 FAR 52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)

- (a) The Government may extend the term of this task order by written notice to the Contractor within 5 calendar days before the expiration of this task order; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 30 days before the contract expires. The preliminary notice does not commit the Government to an extension.
- (b) If the Government exercises this option, the extended task order shall be considered to include this option clause.
- (c) The total duration of this task order, including the exercise of any options under this clause, shall not exceed 60 months.

3.3 EPA-J-52-101 LIST OF ATTACHMENTS

Attachment 1: QUALITY ASSURANCE SURVEILLANCE PLAN

3.4 INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS

EPA-L-36-101 RFTOP PROPOSAL INSTRUCTIONS

The offeror's response shall not exceed 15 double sided pages each and shall include all charts, illustrations, etc. This limitation does not include resumes. Font size: must be 11 points or larger (smaller text in figures, graphs, diagrams and charts is acceptable as long as it is legible when the page is viewed at 100%).

(a) TECHNICAL PROPOSAL INSTRUCTIONS:

- (1) The technical proposal shall be complete and demonstrate an understanding of the work to be provided and the contractor's ability to perform the work in accordance with PWS. The technical proposal shall address all of the technical evaluation criteria presented in this section.
- (2) Each section of the proposal shall be titled.
- (3) Subcontractors

Each offeror shall list in a table format the name and addresses of all subcontractors who will perform work or labor or render services to the offeror for compensation in an amount in excess of one percent of the offeror's total price. Each offeror shall show on the table the portion of the work to be done by each subcontractor. This table shall be included with the technical proposal. The table shall include: (a) the name and address of the subcontractor, (b) a short description of the work the subcontractor will be designated to perform or deliver, (c) the portion in percent of the work (LOE) the subcontractor will be designated to perform or deliver.

(4) Conflict of Interest

- Vendors shall provide a completed version of the certification at EPA-H-09-106 task order conflict of interest certification as part of its Technical Proposal. The complete certification will not count against the page limitations for the Technical Proposal.
- Consistent with the terms of the prime contract, vendors shall disclose any actual or potential conflict of interest to the Contracting Officer within 7 days after receipt of the Request for Task Order Proposal. The disclosure shall include a description of actions which the Contractor has taken or proposes to take, after consultation with the Contracting Officer, to avoid, mitigate, or neutralize the actual or potential conflict of interest.
- For the purposes of this RFP, EPA believes an actual or potential conflict of interest may exist. In order to properly manage the major projects, the Office will use this task order to supplement its Program Management (PM) resources. PM support provided by contractors includes the roles of Project Status/Reporting, Earned Value Management, Risk Management, and Quality Management. In addition, PM support may include assistance in acquisition planning. Because of the sensitive nature of some of these activities and the requirement that the Contractor provide independent reviews of such things as EVM reports, identified risks, and QASP assessments, the following preclusions shall apply for the period of performance of this procurement, including the base and any exercised option years:

(b) TECHNICAL EVALUATION CRITERIA

Technical Evaluation Factors listed below are of equal importance.

Factor 1 – Technical Approach: The Contractor shall propose their Technical Approach for accomplishing the objectives, requirements, and tasks and subtasks of the task order.

Factor 2 – Staffing Approach: The Contractor shall describe their staffing approach in the form of a Staffing Plan. The Plan shall describe the role and level of involvement of each proposed team member in implementing the required tasks.

(c) COST PROPOSAL

Instructions:

The purpose of these cost instructions is to assist offerors in submitting information required to evaluate the reasonableness of proposed costs. All dollar amounts provided shall be rounded to the nearest dollar. The labor rates used for this task order shall not exceed the labor rates included in the base IDIQ contract. However, EPA will accept discounted rates.

Travel costs shall not exceed \$2,000 per year. Contractors are encouraged to use public transportation.

ATTACHMENT 1

QUALITY ASSURANCE SURVEILLANCE PLAN

QUALITY ASSURANCE SURVEILLANCE PLAN

PERFORMANCE REQUIREMENT	PERFORMANCE MEASURE (PM)	PERFORMANCE STANDARD	SURVEILLANCE METHOD	INCENTIVES & DISINCENTIVES
<p><u>MANAGEMENT AND COMMUNICATION:</u></p> <p>The contractor shall maintain contact with the EPA CO, COR, and TOCOR throughout the performance of the contract.</p>	<p>Contractor shall immediately bring potential problems to the appropriate EPA personnel and shall recommend actions that would mitigate or resolve the problem.</p>	<p>Issues that impact project schedules and costs shall be brought to the attention of the EPA within 3-days of occurrence.</p>	<p>All active task orders will be reviewed by the EPA to identify unreported issues.</p>	<p>Performance will be considered in the award of subsequent task orders and will be factored into the annual evaluation of Business Relations in the Contractor Performance Assessment Reporting System (CPARS).</p>
<p><u>TIMELINESS:</u></p> <p>For every Task Order awarded establishing a firm, specific delivery date for the generation of a report, the contractor shall deliver such report to the COR, TOCOR and CO no later than the time specified in the order's PWS.</p>	<p>Deliverables and related work must comply with contractual timeliness requirements. The contractor will be evaluated on its responsiveness to all task orders.</p>	<p>95% of all deliverables and related work shall be completed on time within task schedule and/or tech. direction requirements.</p>	<p>100% inspection of all deliverables and related work by the TOCOR; TOCOR will document the timeliness of all work requirements.</p>	<p>Performance will be considered in the award of subsequent task orders and will be factored into the annual evaluation of Timeliness in the Contractor Performance Assessment Reporting System (CPARS).</p>
<p><u>TECHNICAL QUALITY:</u></p> <p>For every task order awarded, the analyses conducted by the contractor shall be factual, defensible, credible, and based on sound scientific methods. All data shall be collected from reputable sources and quality assurance measures shall be conducted in accordance with the agency requirements outlined in the task orders.</p>	<p>All deliverables and related work must be complete, accurate, thorough, and professionally credible.</p>	<p>Data are 100% accurate; review demonstrates a high level of expertise and credibility with regard to personnel and use of scientific methodology. Task Orders shall be conducted in strict conformance with approved QA plans. Outputs shall withstand internal review by the US EPA and outside scientific reviewers.</p>	<p>EPA Staff will conduct secondary reviews of work completed by the contractor. Feedback will be provided.</p>	<p>Performance will be considered in the award of subsequent task orders and will be factored into the annual evaluation in the category of Quality of Product or Service in the Contractor Performance Assessment Reporting System (CPARS).</p>

TASK ORDER CLAUSES

Period of Performance

The period of performance of this task order is 09/24/2019 – 09/23/2022

Submission of Invoices

Invoices shall be submitted in accordance with EPAAR 1552.232-70 SUBMISSION OF INVOICES. (JUN 1996) - ALTERNATE I (JUN 1996). See address below.

RTP Finance Center

US Environmental Protection Agency

RTP-Finance Center (AA216-01)

109 TW Alexander Drive

www2.epa.gov/financial/contracts

Durham NC 27711

E.2 Period of Performance

Base:	12 months from award date
Option 1:	12 months from option exercise
Option 2:	12 months from option exercise
Option 3:	12 months from option exercise

F. TASK ORDER TYPE

Time and materials & Firm Fixed Price

G. INSPECTION AND ACCEPTANCE

G.1 Quality Assurance Project Plan

The contractor shall submit the following quality system documentation to the CO at the time frames identified below:

Documentation	Specifications	Due
Quality Assurance		
Project Plan for the Task		
Order	EPA Requirements for Quality Assurance Project Plans (QA/R-5) [dated03/20/11]	Task Order proposal due date

This documentation can be found on the following EPA website –

<https://www.epa.gov/quality/epa-qar-5-epa-requirements-quality-assurance-project-plans>

This documentation will be prepared in accordance with the specifications identified above or equivalent specifications defined by EPA.

The Government will review and return the quality documentation, with comments, and indicating approval or disapproval. If necessary, the contractor shall revise the documentation to address all comments and shall submit the revised documentation to the government for approval.

The contractor shall not commence work involving environmental data generation or use until the Government has approved the quality documentation.

H. TASK ORDER ADMINISTRATION DATA

H.1 Contract Administration Representatives

Contracting Officer: Jody Gosnell, Gosnell.jody@epa.gov

Contracting Officer's Representative: Sharlene Matten, matten.sharlene@epa.gov

I. INVOICING

Invoices shall be submitted in accordance with contract clause G.3 EPAAR 1552.232-70

SUBMISSION OF INVOICES. (JUN 1996) - ALTERNATE I (JUN 1996).

J. TASK ORDER CLAUSES

Local Clauses EPA-H-42-102 UTILIZATION OF FEDCONNECT FOR CONTRACT

ADMINISTRATION

EPA will utilize the FedConnect® web portal in administering this contract. The contractor must be registered in FedConnect® and have access to the FedConnect website located at <https://www.fedconnect.net/Fedconnect/>. For assistance in registering or for other FedConnect® technical questions please call the FedConnect® Help Desk at (800) 899-6665 or email at support@fedconnect.net.

FAR 52.216-18 ORDERING. (OCT 1995)

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from **09/24/2019** through **09/23/2023**.

(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.

(c) If mailed, a delivery order or task order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

FAR 52.216-19 ORDER LIMITATIONS. (OCT 1995)

(a) *Minimum order.* When the Government requires supplies or services covered by this contract in an amount of less than \$10,000.00, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) *Maximum order.* The Contractor is not obligated to honor-

(1) Any order for a single item in excess of \$4.5 Million;

(2) Any order for a combination of items in excess of \$4.5 Million; or

(3) A series of orders from the same ordering office within 7 days that together call for quantities exceeding the limitation in subparagraph (b)(1) or (2) above.

(c) If this is a requirements contract (*i.e.*, includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR)), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in paragraph (b) above.

(d) Notwithstanding paragraphs (b) and (c) above, the Contractor shall honor any order exceeding the

maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within 3 days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

FAR 52.217-8 OPTION TO EXTEND SERVICES. (NOV 1999)

The Government may require continued performance of any services within the limits and at the rates specified in the contract. These rates may be adjusted only as a result of revisions to prevailing labor rates provided by the Secretary of Labor. The option provision may be exercised more than once, but the total extension of performance hereunder shall not exceed 6 months. The Contracting Officer may exercise the option by written notice to the Contractor within 30 days before the contract expires.

FAR 52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)

- (a) The Government may extend the term of this contract by written notice to the Contractor within 30 days; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.
- (b) If the Government exercises this option, the extended contract shall be considered to include this option clause.
- (c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 36 months.

LOCAL CLAUSE - EPA-B-32-103A - LIMITATION OF GOVERNMENT'S OBLIGATION

- (a) Severable services may be incrementally funded. Non-severable services shall not be incrementally funded. Contract

line items 1 through 32 are severable and may be incrementally funded. For these items, the sum of \$835,597.00 of the total price is presently available for payment and allotted to this contract.

- (b) For items identified in paragraph (a) of this clause, the Contractor agrees to perform up to the point at which the total amount payable by the Government, including reimbursement in the event of termination of those items for the Government's convenience, approximates the total amount currently allotted for those items to the contract. The Contractor shall not continue work on those items beyond that point. Subject to the clause entitled, "Termination for Convenience of the Government," the Government will not be obligated, under any circumstances, to reimburse the Contractor in excess of the amount payable by the Government in the event of the termination of applicable contract line items for convenience including costs, profit, and estimated termination costs for those line items.

- (c) Notwithstanding the dates specified in the allotment schedule in paragraph (h) of this clause, the Contractor will notify the Contracting Officer, in writing, at least 5 days prior to the date when, in the Contractor's best judgment, the work will reach the point at which the total amount payable by the Government, including any cost for termination for convenience, will approximate 85% of the total amount currently allotted to the contract for performance of the applicable items. The notification will state (1) the estimated date when that point will be reached and (2) an estimate of additional funding, if any, needed to continue performance of the applicable line items up to the next scheduled date for the allotment of funds identified in paragraph (a) of this clause, or to a substitute date as determined by the Government pursuant to paragraph (d) of this clause. If, after such notification, additional funds are not allotted by the date identified in the Contractor's notification, or by an agreed

substitute date, the Contracting Officer will terminate any item(s) for which additional funds have not been allotted, pursuant to the clause entitled "Termination for Convenience of the Government."

(d) The parties contemplate that, subject to the availability of appropriations, the Government may allot additional funds for continued performance of the contract line items identified in paragraph (a) of this clause and will determine the estimated period of contract performance which will be covered by the funds. If additional funds are allotted, the Contracting Officer will notify the Contractor in writing. The Contractor shall not resume performance of the contract line items identified in paragraph (a) until the written notice is received. The provisions of paragraphs (b) through (d) of this clause will apply in like manner to the additional allotted funds and to the new estimated period of contract

performance. The contract will be modified accordingly.

(e) The Government may, at any time prior to termination, allot additional funds for the performance of the contract line items identified in paragraph (a) of this clause.

(f) The termination provisions of this clause do not limit the rights of the Government under the clause entitled "Default". The provisions of this clause are limited to the work and allotment of funds for the contract line items set forth in paragraph (a) of this clause. This clause no longer applies once the contract is fully funded.

(g) Nothing in this clause affects the right of the Government to otherwise terminate this contract pursuant to the contract clause entitled "Termination for Convenience of the Government".

(h) The parties contemplate that the Government may obligate funds to this contract in accordance with the following schedule:

RECAPITULATION:

	PRIOR AMOUNT	THIS MOD	NEW AMOUNT
BASE PERIOD			
Total Maximum Amount:	\$0.00	\$0.00	\$3,591,374.00
Funded Amount:	\$0.00	\$0.00	\$854,197.00

(End of clause)

FAR 52.252-2 CLAUSES INCORPORATED BY REFERENCE. (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. The full text of a clause may be accessed electronically at this/these address(es): FAR: <http://farsite.hill.af.mil/vmfara.htm> ; EPAAR: <http://farsite.hill.af.mil/vmepaara.htm>

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE		PAGE OF PAGES 1 7		
2. AMENDMENT/MODIFICATION NO. P00001		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO. PR-OCSP-19-00263		5. PROJECT NO. (If applicable)	
6. ISSUED BY HPOD		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
HPOD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x)		9A. AMENDMENT OF SOLICITATION NO.	
BATTELLE MEMORIAL INSTITUTE Attn: Brian Panoff 505 KING AVE COLUMBUS OH 432012693						9B. DATED (SEE ITEM 11)	
				x		10A. MODIFICATION OF CONTRACT/ORDER NO. 68HE0H18D0009 68HERH19F0400	
CODE 007901598				FACILITY CODE		10B. DATED (SEE ITEM 13) 09/25/2019	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
X	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not ☒ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

DUNS Number: 007901598

This Task Order is for severable services pertaining to the Endocrine Disruptor Screening Program


TOCOR: Smatten Max Expire Date: 09/27/2023 Invoice Approver: Sharlene Matten

The purpose of this modification is to:

1. Include Line Item 0009 in the amount of \$2,935.00 that did not display on the original award
2. Include Line Item 0010 in the amount of \$1,643.00 that did not display on the original award

Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Jody Gosnell	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)	16C. DATE SIGNED 09/27/2019

Previous edition unusable

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED 68HE0H18D0009/68HERH19F0400/P00001	PAGE	OF
		2	7

NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
0001	<p>NOTE: Including and displaying these amounts reflected the corrected new total amount for the award of \$3,591,374.00. All other Terms and Conditions remain unchanged.</p> <p>LIST OF CHANGES: Reason for Modification: Other Administrative Action Total Amount for this Modification: \$0.00 New Total Amount for this Award: \$3,591,374.00</p> <p>Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Period of Performance: 09/25/2019 to 09/24/2023</p> <p>Change Item 0001 to read as follows (amount shown is the total amount):</p>				
	<p>BASE YEAR: ENDOCRINE DISRUPTOR SCREENING PROGRAM TECHNICAL AND SUPPORT SERVICES: in accordance with the Performance Work Statement.</p> <p>TASK 1 - MGMT REPORT TASK 2 - QAPP TASK 3 - DATA ANALYSIS TASK 4.1 - FSTRA TASK 4.2 - AMA TASK 4.3 - PUBLICATION TASK 4.4 - TEMPLATES</p> <p>P.O.P: 9/25/2019 - 9/24/2020</p> <p>Accounting Info: 18-19-B-C2A00EA-000C54-2505-19C20SE008-001 BFY: 18 EFY: 19 Fund: B Budget Org: C2A00EA Program (PRC): 000C54 Budget (BOC): 2505 DCN - Line ID: 19C20SE008-001 Funding Flag: Partial Funded: \$0.00 FOB: Destination</p> <p>Change Item 0002 to read as follows (amount shown Continued ...</p>				617,436.00

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	68HE0H18D0009/68HERH19F0400/P00001	3	7

NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
0002	<p>is the total amount):</p> <p>OPTION YEAR 1: ENDOCRINE DISRUPTOR SCREENING PROGRAM TECHNICAL AND SUPPORT SERVICES: in accordance with the Performance Work Statement.</p> <p>TASK 1 - MGMT REPORT TASK 2 - QAPP TASK 3 - DATA ANALYSIS TASK 4.1 - FSTRA TASK 4.2 - AMA TASK 4.3 - PUBLICATION TASK 4.4 - TEMPLATES</p> <p>P.O.P: 9/25/2020 - 9/24/2021 (Option Line Item)</p> <p>FOB: Destination</p> <p>Change Item 0003 to read as follows (amount shown is the total amount):</p>				637,083.00
0003	<p>OPTION YEAR 2: ENDOCRINE DISRUPTOR SCREENING PROGRAM TECHNICAL AND SUPPORT SERVICES: in accordance with the Performance Work Statement.</p> <p>TASK 1 - MGMT REPORT TASK 2 - QAPP TASK 3 - DATA ANALYSIS TASK 4.1 - FSTRA TASK 4.2 - AMA TASK 4.3 - PUBLICATION TASK 4.4 - TEMPLATES</p> <p>P.O.P: 9/25/2021 - 9/24/2022 (Option Line Item)</p> <p>FOB: Destination</p> <p>Change Item 0004 to read as follows (amount shown is the total amount):</p>				659,554.00
0004	<p>OPTION YEAR 3: ENDOCRINE DISRUPTOR SCREENING PROGRAM TECHNICAL AND SUPPORT SERVICES: in accordance with the Performance Work Statement. Continued ...</p>				679,388.00

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED 68HE0H18D0009/68HERH19F0400/P00001	PAGE	OF
		5	7

NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
0008	Accounting Info: 18-19-B-C2A00EA-000C54-2505-19C2OSE008-001 BFY: 18 EFY: 19 Fund: B Budget Org: C2A00EA Program (PRC): 000C54 Budget (BOC): 2505 DCN - Line ID: 19C2OSE008-001 Funding Flag: Partial Funded: \$0.00 FOB: Destination Change Item 0008 to read as follows (amount shown is the total amount):				
	Task 4.2 EVD INT (BASE) P.O.P: 09/25/2019 - 09/24/2020				2,453.00
0009	Accounting Info: 18-19-B-C2A00EA-000C54-2505-19C2OSE008-001 BFY: 18 EFY: 19 Fund: B Budget Org: C2A00EA Program (PRC): 000C54 Budget (BOC): 2505 DCN - Line ID: 19C2OSE008-001 Funding Flag: Partial Funded: \$0.00 FOB: Destination Change Item 0009 to read as follows (amount shown is the total amount):				
	Task 4.3 OUAL EVAL (BASE) P.O.P: 9/25/2019 - 9/24/2020				2,935.00
0010	Accounting Info: 18-19-B-C2A00EA-000C54-2505-19C2OSE008-001 BFY: 18 EFY: 19 Fund: B Budget Org: C2A00EA Program (PRC): 000C54 Budget (BOC): 2505 DCN - Line ID: 19C2OSE008-001 Funding Flag: Partial Funded: \$0.00 Change Item 0010 to read as follows (amount shown is the total amount):				
	Task 4.3 EVD INT (BASE) P.O.P: 9/25/2019 - 9/24/2020				1,643.00
	Accounting Info: 18-19-B-C2A00EA-000C54-2505-19C2OSE008-001 BFY: 18 EFY: 19 Fund: B Budget Org: C2A00EA Program (PRC): 000C54 Budget (BOC): 2505 DCN - Line ID: 19C2OSE008-001 Funding Flag: Partial Continued ...				

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED 68HE0H18D0009/68HERH19F0400/P00001	PAGE	OF
		6	7

NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Funded: \$0.00				
0011	Change Item 0011 to read as follows (amount shown is the total amount): Task 4.5 AROMA (BASE) P.O.P: 9/25/2019 - 9/24/2020 Accounting Info: 18-19-B-C2A00EA-000C54-2505-19C20SE008-001 BFY: 18 EFY: 19 Fund: B Budget Org: C2A00EA Program (PRC): 000C54 Budget (BOC): 2505 DCN - Line ID: 19C20SE008-001 Funding Flag: Partial Funded: \$0.00 FOB: Destination				218,161.00
0012	Change Item 0012 to read as follows (amount shown is the total amount): TASK 4.1 QUAL EVAL (OY1) P.O.P: 9/25/2020 - 9/24/2021 (Option Line Item) FOB: Destination				4,697.00
0013	Change Item 0013 to read as follows (amount shown is the total amount): Task 4.1 EVD INT (OY1) P.O.P 9/25/2020 - 9/24/2021 (Option Line Item) FOB: Destination				2,530.00
0014	Change Item 0014 to read as follows (amount shown is the total amount): Task 4.2 QUAL EVAL (OY1) P.O.P: 9/25/2020 - 9/24/2021 (Option Line Item) FOB: Destination				4,697.00
0015	Change Item 0015 to read as follows (amount shown is the total amount): Task 4.2 EVD INT (OY1) P.O.P: 09/25/2020 - 09/24/2021 (Option Line Item) Continued ...				2,530.00

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	68HE0H18D0009/68HERH19F0400/P00001	7	7

NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	FOB: Destination				
	Change Item 0016 to read as follows (amount shown is the total amount):				
0016	Task 4.3 OUAL EVAL (OY1) P.O.P: 9/25/2020 - 9/24/2021 (Option Line Item)				3,040.00
	FOB: Destination				
	Change Item 0017 to read as follows (amount shown is the total amount):				
0017	Task 4.3 EVD INT (OY1) P.O.P: 9/25/2020 - 9/24/2021 (Option Line Item)				1,703.00
	FOB: Destination				
	Change Item 0018 to read as follows (amount shown is the total amount):				
0018	Task 4.5 AROMA (OY1) P.O.P: 9/25/2020 - 9/24/2021 (Option Line Item)				225,815.00
	FOB: Destination				
	Change Item 0019 to read as follows (amount shown is the total amount):				
0019	TASK 4.1 QUAL EVAL (OY2) P.O.P: 9/25/2021 - 9/24/2022 (Option Line Item)				4,843.00
	FOB: Destination				
	Change Item 0020 to read as follows (amount shown is the total amount):				
0020	Task 4.1 EVD INT (OY2) P.O.P 9/25/2021 - 9/24/2022 (Option Line Item)				2,610.00
	FOB: Destination				

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE		PAGE OF PAGES	
				13	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.	
P00002		See Block 16C		5. PROJECT NO. (If applicable)	
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)	
HPOD				CODE	
US Environmental Protection Agency					
William Jefferson Clinton Building					
1200 Pennsylvania Avenue, N. W.					
Mail Code: 3803R					
Washington DC 20460					
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)		(x)		9A. AMENDMENT OF SOLICITATION NO.	
BATTELLE MEMORIAL INSTITUTE					
Attn: Brian Panoff				9B. DATED (SEE ITEM 11)	
505 KING AVE					
COLUMBUS OH 432012693					
CODE		FACILITY CODE		10A. MODIFICATION OF CONTRACT/ORDER NO.	
007901598				68HE0H18D0009	
				68HERH19F0400	
				10B. DATED (SEE ITEM 13)	
				09/25/2019	
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended.					
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
See Schedule					
13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
CHECK ONE					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
X B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)					
DUNS Number: 007901598					
The purpose of this modification is to change the Task Order COR and Alternate Task Order COR. All other terms and conditions remain the same.					
TOCOR: Kristan Markey Max Expire Date: 09/27/2023 Invoice Approver: Kristan Markey Alt					
Invoice App: Scott Lynn					
LIST OF CHANGES:					
Reason for Modification: Other Administrative Action					
Total Amount for this Modification: \$0.00					
Contracting Officer Representative changed					
Continued ...					
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
		Kathleen Rechenberg			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA	
(Signature of person authorized to sign)				Kathleen Rechenberg ELECTRONIC SIGNATURE	
				(Signature of Contracting Officer)	
				16C. DATE SIGNED	
				12/18/2019	

NAME OF OFFEROR OR CONTRACTOR
 BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	from Sharlene Matten to Kristan Markey TOCOR (Task Order Contracting Officer's Representative) changed to : Kristan Markey Alternate COR/Project Officer changed to : Scott Lynn Invoice Approving Official changed to : Kristan Markey Alternate Invoice Approving Official changed to : Scott Lyn Payment: Period of Performance: 09/25/2019 to 09/24/2023				



ENVIRONMENTAL PROTECTION AGENCY

EPA Office of Science and Coordination Policy:

Technical Support for Data

Analysis/Management and Linear Systematic

Literature Reviews for EDSP

Task Order 2

Request for Task Order Proposal (RFTOP)

EPA Office of Science and Coordination Policy: *Technical Support for Data Analysis/Management and Linear Systematic Literature Reviews for EDSP*

1 PERFORMANCE WORK STATEMENT (PWS)

1.1 PURPOSE

The purpose of this task order (TO), **EPA Office of Science and Coordination Policy: *Technical Support for Data Analysis and Linear Systematic Literature Reviews for EDSP***, will provide technical support to the Office of Science Coordination and Policy (OSCP), Office of Chemical Safety & Pollution Prevention (OCSPP) in two (2) general areas:

1. Data Analysis and Management
2. Linear Systematic Literature Reviews for EDSP

1.2 BACKGROUND

The Office of Science and Coordination Policy (OSCP) manages EPA's Endocrine Disruptor Screening Program (EDSP) and two federal advisory committees, FIFRA Scientific Advisory Panel and the TSCA Science Advisory Committee on Chemicals.

The Endocrine Disruptor Screening Program (EDSP) was established in 1998 under authorities contained in the 1996 *Food Quality Protection Act* (FQPA) and the 1996 *Safe Drinking Water Act* (SDWA) amendments. As mandated by these statutes, the EDSP develops a screening program to determine whether certain substances may have endocrine activity in humans and wildlife. The US EPA has developed a two-tiered approach for screening chemicals and pesticides. The Tier 1 battery is used to identify substances that have potential to interact with the estrogen, androgen or thyroid hormone pathways. The Tier 2 tests identify and establish dose response information for adverse effects for substances identified in the Tier 1 screening. Beginning in 2015, the EDSP is incorporating ToxCast high throughput screening data and computational models in the prioritization and screening of a chemical's potential to interact with the endocrine system in humans and wildlife for a portion of the Tier 1 battery. This approach will allow nearly 20 times the current number of screenings to be performed while dramatically reducing animal testing, allowing the Agency to meet its goals with a relatively level budget.

The EPA's EDSP is continuing the development and validation of alternative testing methodologies (i.e., high throughput assays and computational tools) to prioritize and screen chemicals based on potential endocrine bioactivity and exposure--in particular, the estrogen, androgen, or thyroid hormone pathways in humans and wildlife. This increased use of alternative testing methodologies will improve the output of screening results, allowing for greater biological coverage of the endocrine system.

1.3 TASK 1: TASK ORDER MANAGEMENT AND REPORTING REQUIREMENTS

- 1.3.1 The Contractor shall schedule a kick-off meeting/conference call with the TOCOR within 10 business days following the TO award. The TOCOR, Alternate (Alt) TOCOR, contract-level COR, and the EPA Contracting Officer (CO) must be invited to the kick-off meeting. Additional participants may be included.
- 1.3.2 The Contractor shall manage all aspects of the task order including, but not limited to, the technical, quality assurance, schedule, cost, and communication requirements.
- 1.3.3 The Contractor shall only work on tasks in the Performance Work Statement as directed by the TOCOR. The TOCOR shall identify specific due dates for deliverables for Tasks 3-4 via technical direction. Technical direction will be provided in writing by the Contracting Officer or the TOCOR as delegated by the Contracting Officer.
- 1.3.4 The Contractor shall schedule at least biweekly meetings (teleconference, in-person, Skype, Adobe Connect, or other media) with the TOCOR to discuss the status of the work including reporting any issues with respect to schedule slip or cost overruns. The TOCOR will identify, as needed, other individuals who should participate in these calls. Additional teleconference calls may be scheduled by the TOCOR as needed. Note: Telephone or in-person reports are not replacements for required written communications.
- 1.3.5 In addition to biweekly meetings, the Contractor shall update the TOCOR via telephone (and follow-up via e-mail) and, in writing, via e-mail, of any issues on an ongoing basis.
- 1.3.6 The Contractor shall immediately inform the TOCOR when any hours or costs for any task has exceeded or is expected to exceed the contractor estimate by >10%.
- 1.3.7 The Contractor shall immediately inform the TOCOR of any problems that may impact the production, budget, and/or delivery of deliverables.
- 1.3.8 The Contractor shall notify the TOCOR when 75% of the Government approved hours or approved LH (labor hour) costs have been incurred (including unbilled hours and costs).
- 1.3.9 The Contractor shall provide a monthly progress report of the combined monthly technical and financial progress report) stating the progress made, including the percentage of the project completed, a description of the work accomplished to support the cost, the estimated percentage of task completed (including deliverables) during the reporting period. The **Executive Summary shall summarize the planned and actual work for the month, financial status, work planned for the next month, and significant issues, risks, or concerns. The monthly report shall also provide cost and technical progress data for each of the defined tasks (by labor category for each task) and projected costs for the upcoming reporting period.**
 - For the technical progress report also include the following specific information:
 - Narrative detail review of accomplishments during the reporting period and/or significant events, as well as an assessment of work being completed on schedule and budget.
 - Status of all ongoing activities in accordance with the technical proposal and technical directives.
 - List of deliverables with delivery dates (planned versus actual).
 - Anticipated activities and deliverables for the next reporting period.
 - Specific discussions shall include difficulties encountered and remedial action taken during the reporting period, and anticipated activity with a schedule of deliverables for the subsequent reporting period.

- List of current contractors / staffing roster and any changes that may impact deliverables in advance of the reporting period (e.g., change in personnel and vacations).
 - Monthly Contractor performance information (performance metrics).
- For the financial report, include the following information:
 - Identification of cost issues or concerns.
 - For the current period, display the amount claimed.
 - For the cumulative period display the total amount claimed; amount paid; amount suspended or disallowed; and remaining amount.
 - Labor hours.
 - (i) A list of employees, their labor categories, and the number of hours worked for the reporting period.
 - (ii) For the current reporting period display the expended direct labor hours (by EPA contract labor category), and the total loaded direct labor hours.
 - (iii) For the cumulative reporting period and the cumulative contract period display: The negotiated and expended direct labor hours (by EPA labor hour category) and the loaded direct labor rate.
 - (iv) Display the estimated direct labor hours and costs to be expended during the next reporting period.
 - (v) Display the estimates of remaining direct labor hours and costs required to complete the task order.
 - Unbilled allowable costs. Display the total costs incurred but unbilled for the current reporting period and cumulative for the task order.
 - Average total cost labor hour. For the current contract period, compare the actual total cost per hour to date with the average total cost per hour of the approved technical proposal for the task order.
 - The monthly report does not change the notification requirements of the “Limitation of Cost” or “Limitation of Funds” clauses requiring separate written notice to the Contracting Officer.
- 1.3.10 The Contractor shall maintain a cumulative record of all communications between the contractor and EPA (all media including e-mail and telephone calls) and provide it to the TOCOR within one month after the TO has ended.
- 1.3.11 The contractor shall provide all deliverables in an electronic format specified by the EPA TOCOR (e.g., Word, Excel, Access, HTML) via electronic mail. The Contractor shall format any deliverables intended for posting on an EPA public website to comply with Section 508.
- 1.3.12 Unless otherwise specified by the TOCOR, the Contractor shall provide a secure method for internet transfer of large files.
- 1.3.13 All deliverables for this task order are the property of EPA.
- 1.3.14 Contractor personnel shall identify themselves as contractor employees and shall not present themselves as EPA employees. Furthermore, they shall not represent view of the U.S. Government, EPA, or its employees. In addition, the contractor shall not engage in inherently governmental activities, including, but not limited to actual determination of EPA policy and preparation of documents on EPA letterhead other than routine correspondences.

1.4 TASK 2. QUALITY ASSURANCE AND QUALITY ASSURANCE PROJECT PLAN (QAPP)

The Contractor shall implement a quality system that meets ANSI standard E4-2014.

For planning purposes, assume that a Quality Assurance Project Plan (QAPP) will be required for Tasks 3 and 4. The contractor shall create a Quality Assurance Project Plan (QAPP) that documents the planning, implementation, and assessment procedures for quality assurance and quality control activities. The QAPP integrates all the technical and quality aspects of the project to provide a blueprint for obtaining the type and quality of environmental data and information needed for a specific decision or use. The QAPP shall be prepared in accordance with the specifications identified by EPA (found at <https://www.epa.gov/quality/epa-qar-5-epa-requirements-quality-assurance-project-plans>).

The Government will review and return the quality documentation, with comments, and indicating approval or disapproval. If necessary, the contractor shall revise the documentation to address all comments and shall submit the revised documentation to the government for approval.

The Contractor shall not commence work involving environmental data generation or use until the Government has approved the quality documentation.

1.5 TASK 3: DATA ANALYSIS AND MANAGEMENT

The contractor shall provide EPA with technical assistance in data analysis and data management to support the EDSP. EPA may order work that requires a short turn-around time. The Contractor shall use, to the extent possible, open source tools, e.g., R, Python 3, MySQL, PostgreSQL, MongoDB, etc.

The contractor shall provide support for:

1. Data and statistical analysis, e.g., compiling and evaluating *in vitro* and *in vivo* data from multiple sources, preparing or revising reports, statistical support and data analysis for publication, preparing data evaluation records using EPA study profile templates for the EDSP, *etc.*
2. Data management related to specific data/statistical analyses.
3. Support collecting, prioritizing, and analyzing *in vitro* and *in vivo* data for display on the EPA [CompTox Chemicals Dashboard](#) via systematic review (SR) and high-throughput assays (in vitro only).
4. Data analysis using publicly available models, e.g., PBTK 1-compartment model.
5. The Contractor shall support the data (including data cleaning), statistical (such as meta-analysis of studies), toxicological, and textual analysis (such as text mining and natural language processing analysis) for EDSP systematic reviews.

Examples include:

1. Development of EPA Data Evaluation Records from EPA-sponsored laboratory studies including supporting statistical analysis, as needed.
2. Statistical analysis of EPA data either for an individual study or multiple studies.
3. Meta-analysis of collected data from EPA or published *in vitro/in vivo* studies.
4. Rao-Scott Cochran-Armitage by Slices trend test (**RSCABS**) used in analysis of histopathological endpoints.
5. Data and statistical analysis of EPA toxicokinetics data.
6. Cross-species analyses.
7. *In vitro* to *in vivo* extrapolation using publicly available models, e.g., use of 1-compartment PBTK model.
8. Analysis of *in vitro* toxicokinetics data in trout, rat, and human.

In response to the RFO, the contractor should base the labor hour quote for data analysis and management on the following:

1. Statistical analysis for an individual assay. Assume that cost estimates are based on the number of endpoints per assay to be analyzed, depending on the assay and the protocol. These are assumed to be the customary in-life and biological endpoints, such as survival, growth, reproduction, and biochemistry. Statistical analysis of histopathology data using RSCABs may also be included.
2. Development of EPA Data Evaluation Records from EPA-sponsored laboratory studies including supporting statistical analysis, as needed. Cost estimates are based on the use of EPA Study Evaluation Templates (e.g., OCSPP 890 test guideline series).
3. One (1) meta-analysis of collected data from EPA or published *in vitro/in vivo* studies per year (for cost purposes).
4. Data management using IUCLID or other templates.
5. Data analysis using published PBTK models or QSARs (as examples).

1.6 TASK 4: SUPPORT EDSP LINEAR SYSTEMATIC LITERATURE REVIEWS

The Contractor shall provide technical support for EDSP linear systematic literature reviews. The primary purpose of these systematic literature reviews is to identify *in vivo* reference chemicals from EDSP Tier 1 test guideline (TG) or guideline-like *in vivo* studies that can be used in the performance validation of new alternative methods (NAMs), e.g., high throughput (HT) assays and computational models, for the estrogen, androgen, and thyroid pathways and/or to map available scientific literature on EDSP-relevant *in vivo* or *in vitro* studies. EPA is working toward using HT assays and models as alternatives to the current *in vitro* and *in vivo* assays in the EDSP's Tier 1 & 2 assays. Other study designs such as the [thyroid comparative assay](#) or those identified in [OECD Guidance Document 150](#) may also be of interest to the EDSP.

Specifically, the Contractor shall support the EPA with scientific expertise to perform title/abstract screening, full-text screening, data extraction, other annotations, template development, study quality evaluation, and evidence integration as directed by EPA on Tier 1 and Tier 2 assays and other relevant assays including, but not limited to the Fish Short-Term Reproduction Assay (FSTRA) in three model fish species (*Pimephales promelas*, *Danio rerio*, *Oryzias latipes*) (OCSPP 890.1350/OECD TG 229), Male and Female Pubertal Assays (OCSPP 890.1450 and OCSPP 890.1500, respectively), and Amphibian Metamorphosis Assay (AMA) (OCSPP 890.1100/OECD 230).

EPA may also perform systematic literature reviews or evidence-mapping for other studies similar to the EPA's EDSP Tier 1, Tier 2, other EPA or OECD guideline studies, or other EPA or scientific standard studies (e.g., [thyroid comparative assay](#), aromatase assay, avian reproduction assay, and rainbow trout assays (*Oncorhynchus mykiss*)).

General requirements for Task 4

1. Assume EPA shall provide the contractor with licenses to use collaborative web-based systematic literature review software to accomplish the tasks (such as DistillerSR). Otherwise, the contractor should use software to which the contractor already has access and licenses or is otherwise open-source and/or free of charge. Assume that EPA shall provide reviewers' access to all PDFs via its HERO system, and that the contractor will not acquire their own copies of articles.
2. Each systematic literature review shall be conducted using at least two (2) senior (P3 or P4) scientific technical experts whose technical background is reviewed and approved by EPA as described in Tasks 4.1, 4.2, 4.3, and 4.5 below. The contractor may identify additional senior level scientific technical experts to complete this task.
3. For each systematic literature review that requires the use of a non-EPA gold standard reviewer, the contractor shall identify a P4 or equivalent to provide authoritative guidance on scientific processes,

results, evaluations, outcomes, and terminology.

4. For each systematic literature review that requires building of templates and workflows for the web-based systematic literature review software, the Contractor shall identify at least one (1) staff member with a background in programming and data management.
5. The contractor shall identify a project manager with a background and experience in managing systematic literature reviews and personnel to coordinate the work of all systematic review team members including the EPA team members assigned to a systematic literature review. The contractor project manager shall
 - Keep the TO COR and Alternate TO COR apprised on all communications back to EPA staff.
 - Regularly report on progress and challenges for each systematic review.
 - Ensure staff availability to accomplish the systematic reviews.
6. The TO COR/alt TO COR shall keep the contracted project manager apprised of EPA scientific staff and roles.
7. The contractor shall use the web-based systematic literature review software as directed by the TO COR to complete the tasks described in this task order and other office suite software as appropriate. EPA shall provide the contractor with licenses to use the web-based systematic literature review software and all instructions to perform the work specified in this task order.
8. EPA shall provide reviewers access to all PDFs via its HERO system¹, and that the contractor will not acquire their own copies of articles.
9. For other software, the contractor should use software to which the contractor already has access and licenses or is otherwise open-source and/or free of charge.
10. Any questions about the templates or bugs encountered in web-based systematic literature review software forms during the review should be forwarded immediately to the EPA TO COR for resolution.

The following steps are required for each systematic literature review in Task 4:

1 Reviewer Calibration Exercises

- a. The contractor shall conduct a reviewer calibration exercise (establish reviewer proficiency and systematic review reproducibility) for all senior level technical experts. If a senior level technical expert has been trained previously by EPA for a step using a web-based form of a systematic review, then this step may not be needed again. Typically, a calibration exercise need only be completed once for each step of a test guideline. Final decision on this will be made by the TO COR.
- b. At least two (2) contractor-selected technical experts and at least one (1) EPA technical expert will independently review the same set of titles/abstracts, articles, and/or DERs using the web-based systematic literature review software.
- c. EPA will compare the contractor and EPA reviews to determine whether reviewer conflicts exist. Any conflicts will be resolved by the contractor and EPA so that consensus is reached.
- d. Once the calibration exercise has been completed, the contractor shall continue with the systematic review steps.

2 Quality Assurance/Quality Control (QA/QC)

a. Blind

A second senior level technical expert will independently (blind) screen or extract 20% of the articles reviewed by the first reviewer, and EPA or the Contractor will conduct an independent discrepancy analysis of the results without discrepancy resolution. If there are more than 5% non-

¹ <https://hero.epa.gov/hero/>

systematic discrepancies or if there are any systematic errors, EPA will evaluate the need for additional QA/QC and order discrepancy resolution or optional quantities via technical directive.

b. Pre-filled

A second senior level technical expert will review results of 20% of the screenings or extractions by the first reviewer, and EPA or the Contractor will conduct an independent discrepancy analysis of the results without discrepancy resolution. If there are more than 5% non-systematic discrepancies or if there are any systematic errors, EPA will evaluate the need for additional QA/QC and order discrepancy resolution or optional quantities via technical directive.

c. Optional Quantities

EPA may order up to 4 optional quantities (up to 100% of the articles) for blind or pre-filled QC via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will QC screen 20% of the reviewed by the first reviewer. EPA or the Contractor will conduct an independent discrepancy analysis of the results to determine whether additional optional quantities are needed.

d. Discrepancy resolution

Senior-level reviewers consult with each other and, as necessary, a project leader or gold standard reviewer, to identify a consensus answer or approach.

e. Gold Standard Reviewer

A gold standard reviewer (may be either an EPA or contract expert as determined by the TO COR) to resolve discrepancies when a consensus answer or approach is not feasible under discrepancy resolution. Gold standard reviewers will participate in reviewer calibration exercises.

f. EPA QC

After each systematic review step, EPA shall sample a subset of articles for QC by EPA experts as determined by the TO COR. Depending on the outcome of this QC, EPA may order additional review via technical directive.

3 Abstract/Title Screening

Using web-based systematic literature review software provided by EPA two or more senior level (P3 or P4) technical experts shall independently review and evaluate titles and abstracts from scientific literature searches to ascertain the potential relevance and utility of these articles to the overall goals of systematic review. EPA may also ask specific questions on articles web-based systematic literature review software.

a. Reviewer Calibration Exercises – Calibration on 25-50 articles together with a gold standard reviewer

b. QA/QC

i. The Project Leader shall implement blind QC with optional quantities and a gold standard reviewer at intervals determined by the TO COR via technical directive

ii. EPA shall QC the results

4 Full-text Screening

Using web-based systematic literature review software provided by EPA one (1) senior level (P3 or P4) technical expert will perform initial full-text screening in the systematic review process. Full-text screening includes characterization of the overall article, identification and evaluation of potentially relevant experiments within an article, methodological extraction (such as chemicals tested, duration, species, etc.). The same technical reviewer does not have to full-text screen all papers.

a. Reviewer Calibration Exercises – Calibration on 10-15 articles together with a gold standard reviewer

- b. QA/QC
 - i. The Project Leader shall implement blind QC with optional quantities (either blind or pre-filled as determined by the TO COR) at intervals determined by the TO COR via technical directive
 - ii. A gold standard reviewer will be determined as necessary by the EPA TO COR
 - iii. EPA shall QC the results

5 Data extraction

Using web-based systematic literature review software provided by EPA one (1) senior level (P3 or P4) technical expert will extract all relevant data from potentially relevant experiments identified in the full-text screening process into pre-defined forms. The same technical reviewer does not have to extract data from all papers.

- a. Reviewer Calibration Exercises – Calibration on 2-3 articles together with a gold standard reviewer
- b. QA/QC
 - i. The Project Leader shall implement blind QC with optional quantities (either blind or pre-filled as determined by the TO COR) and at intervals determined by the TO COR via technical directive
 - ii. A gold standard reviewer will be determined as necessary by the EPA TO COR
 - iii. EPA shall QC the results

6 Study Quality Evaluation

Using web-based systematic literature review software provided by EPA one (1) senior level (P3 or P4) technical expert will evaluate the study reporting & methodological quality and relevance of experiments extracted from studies into pre-defined forms. The same technical reviewer does not have to evaluate study quality from all papers.

- a. Reviewer Calibration Exercises – Calibration on 2-3 articles together with a gold standard reviewer
- b. QA/QC
 - a. The Project Leader shall implement blind QC with optional quantities (either blind or pre-filled as determined by the TO COR) and at intervals determined by the TO COR via technical directive
 - b. A gold standard reviewer will be determined as necessary by the EPA TO COR
 - c. EPA shall QC the results

7 Evidence Integration

Using web-based systematic literature review and other software provided by EPA one (1) senior level (P3 or P4) technical expert will consider the quality, consistency, relevancy, coherence and biological plausibility to analyze, synthesize and integrate the data/information. It is in this stage where the weight of the scientific evidence approach is applied to evaluate and synthesize multiple evidence streams to support the evaluation. The same technical reviewer does not have to consider all evidence streams.

Application of weight of evidence analysis is an integrative and interpretive process that considers both data/information in favor (e.g., positive study) or against (e.g., negative study) a given hypothesis within the context of the assessment question(s) being evaluated in the risk evaluation.

- a. Reviewer Calibration Exercises – Calibration on 2-3 articles together with a gold standard reviewer
- b. QA/QC
 - The Project Leader shall implement blind QC with optional quantities (either blind or pre-filled as determined by the TO COR) and at intervals determined by the TO COR via

technical directive

- A gold standard reviewer will be determined as necessary by the EPA TO COR
- EPA shall QC the results

Subtask 4.1: Systematic Literature Review - Fish Short-Term Reproduction Assay

The purpose of this subtask is to identify published studies with data that can be used to support the EDSP, for a select set of chemicals provided by the EPA. Relevant literature will cover studies with the potential to be like the EPA's EDSP Tier 1 Fish Short-Term Reproduction Assay (FSTRA; OPPTS 890.1350, Oct. 2009) or the equivalent OECD Test Guideline (OECD TG 229, Sept. 2009). Reference is also made to the study of {Dang, 2011, 1401857}. The studies will be used in the performance-based validation of high throughput (HTP) assays and computational models for the estrogen, androgen, and thyroid pathways. EPA is working toward using HTP assays and models as alternatives to the current *in vitro* and *in vivo* assays in the Endocrine Disruptor Screening Program's Tier 1 battery.

Additionally, EPA seeks to identify potentially relevant scientific literature to characterize cross-species sensitivities to *in vivo* reference chemicals identified potentially relevant to EPA's cross-species study of three model fish species used in the Fish Short-Term Reproduction Assay (OECD test guideline 229). The EPA FSTRA test guideline (OCSPP 890.1350) recommends the use of fathead minnow (*Pimephales promelas*) while the OECD FSTRA test guideline (OECD 229) has been validated for three model fish species: fathead minnow (*P. promelas*), zebrafish (*Danio sp.*), and Japanese medaka (*Oryzae sp.*). The results will be used to further characterize cross-species sensitivities to *in vivo* reference chemicals identified in the fathead minnow (FSTRA model organism).

The contractor shall provide at least **two (2) senior level technical experts (e.g., P3 or P4)** with experience in aquatic toxicity assessment, e.g., EPA or OECD fish chronic and/or lifecycle aquatic toxicity test guideline studies.

1. The reviewers shall conduct full-text screening & data extraction as defined for this Task on articles and data evaluation records identified by EPA.
2. Templates and workflows for full-text screening and data extraction shall identified by EPA specifically for this project in the web-based systematic review literature review software.
3. QA/QC shall be blind, with optional quantities up to 100%. The Contractor may optionally identify a gold standard reviewer as part of the project team

In response to the RFO, the contractor should base the labor hour quote for the systematic review of FSTRA studies on the following assumptions:

1. **Assume two (2) senior level technical experts** (e.g., P3 or P4 equivalent) with experience in aquatic toxicity assessment, e.g., EPA fish chronic and/or lifecycle aquatic toxicity test guideline studies, will perform the work. The contractor may identify additional senior level technical experts to complete the project within the period of performance.
2. **Assume reviewer calibration** using the Distiller™ software **is needed**. Assume that EPA will provide each Contractor senior level technical expert the same set of 5-15 articles to screen the data. One (1) or more EPA technical reviewers will be included in the reviewer calibration exercise.
3. **Full-text Screening**. Assume at least one (1) senior level technical expert will perform the full-text screening on **450 articles** in the systematic review process. Assume full-text screening will average 15-20 minutes/article.
4. **QA/QC (Blind)** – Assume that a second senior level technical expert will independently (blind) screen 20% of the articles reviewed by the first reviewer and that EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
5. **Optional QA/QC (Blind) Quantities** - Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles

reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will independently (blind) screen 20% of the articles reviewed by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

Subtask 4.2: Systematic Literature Review – Amphibian Metamorphosis Assays

The purpose of this subtask is to identify published studies with data that can be used to support the EDSP, for a select set of chemicals provided by the EPA. Relevant literature will cover studies with the potential to be like the EPA's EDSP Tier 1 Amphibian Metamorphosis Assay (Frog) (AMA; OCSPP 890.1100, Oct. 2009) or the equivalent OECD Test Guideline (OECD TG 231, Sept. 2009). Reference is also made to the [Amphibian Metamorphosis Assay OCSPP Guideline 890.1100 Standard Evaluation Procedure \(SEP\)](#) and the modifications for *Silurana tropicalis* outlined in (Mitusui et al., 2006²). The studies will be used in the performance-based validation of high throughput (HTP) assays and computational models for the estrogen, androgen, and thyroid pathways. EPA is working toward using HTP assays and models as alternatives to the current *in vitro* and *in vivo* assays in the Endocrine Disruptor Screening Program's Tier 1 battery.

The contractor shall provide **two (2) senior technical experts**, with experience in ecological and developmental toxicity testing and assessment; EPA's endocrine disruption test guideline studies, e.g., amphibian metamorphosis assay (OPPTS 890.1100); and/or thyroid toxicity testing and the vertebrate HPT axis, to conduct the Amphibian Metamorphosis Assays systematic reviews.

1. The reviewers shall conduct title/abstract screening, full-text screening & data extraction as defined for this Task on articles and data evaluation records identified by EPA.
2. Templates and workflows for title/abstract screening, full-text screening, and data extraction shall identified by EPA specifically for this project in the web-based systematic review literature review software.
3. QA/QC shall be blind, with optional quantities up to 100%. The Contractor may optionally identify a gold standard reviewer as part of the project team.

In response to the RFO, the contractor should base the labor hour quote for the systematic review of AMA studies on the following assumptions:

1. **Assume two (2) senior level technical experts** (e.g., P3 or P4 equivalent) with experience in vertebrate developmental toxicity assessments, EPA's endocrine disruption test guideline studies (890 series) and/or the amphibian metamorphosis assay developmental toxicity assessments will be needed. The contractor may identify additional senior level technical experts to complete the project within the period of performance.
2. **Assume reviewer calibration** using the Distiller™ software **is needed**. Assume that EPA will provide each Contractor senior level technical expert the same set of 2-3 articles or EPA Data Evaluation Records to extract the data. For abstract/title screening, EPA will provide the Contractor senior level technical expert will be provided the same set of 3-5 articles for abstract/title screening and a set of 3-5 articles for full-text screening.

² Naoko Mitsui, Takaaki Fujii, Maki Miyahara, Tomohiro Oka, Akihiko Kashiwagi, Keiko Kashiwagi, Hideki Hanada, Hiroshi Urushitani, Noriaki Santo, Osamu Tooi, and Taisen Iguchi. 2006. Development of metamorphosis assay using *Silurana tropicalis* for the detection of thyroid system-disrupting chemicals. *Ecotoxicology and Environmental Safety* Volume 64, Issue 3, July 2006, Pages 281-287. <https://doi.org/10.1016/j.ecoenv.2005.07.007>

3. Data extraction of 25 articles.

- Assume one (1) senior level technical expert will independently extract data from twenty-five (25) articles that have been completed full-text screening prior to this task order. Assume that each data extraction will take 1 hour per article.
- Assume that these articles must undergo QA/QC as described above.

4. Data extraction of 47 EPA Data Evaluation Records

- Assume one senior level technical expert will extract the data from all 47 EPA Data Evaluation Records (DERs). Assume that this reviewer will average 30 minutes to extract the data for each DER.
- **QA/QC (Spot-Check)** – Assume that a Contractor senior level technical expert will spot check 20% of the data extractions (DERs) previously completed by EPA reviewers. EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
- **Optional QA/QC (Spot-Check) Quantities** – Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the data extractions (DERs) previously conducted by EPA reviewers. For each optional quantity, a Contractor senior level technical expert will spot check 20% of the data extractions (DERs) completed by EPA. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

5. Screening 515 Articles

- **Abstract/Title Screening.** Assume one (1) senior level technical expert will screen the abstract/titles of all 515 articles. Assume abstract/title screening will take 3-5 minutes per article.
 - ✓ **QA/QC (Blind)** – Assume that a second senior level technical expert will independently (blind) screen 20% of the title/abstracts reviewed by the first reviewer and that EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
 - ✓ **Optional QA/QC (Blind) Quantities** - Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will independently (blind) screen 20% of the title/abstracts screened by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.
- **Full-text Screening.** Assume one (1) senior level technical expert will perform the full-text screening/preamble extraction of 170 articles (~33% of 515 articles). Assume full-text screening will average 15-20 minutes/article.
 - ✓ **QA/QC (Blind)** – Assume that a second senior level technical expert will independently (blind) screen 20% of the articles reviewed by the first reviewer and that EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
 - ✓ **Optional QA/QC (Blind) Quantities** - Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will independently (blind) screen 20% of the articles screened by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

6. **Data Extraction.** Assume one (1) senior level technical expert will perform the data extraction of 20 articles (~10% of 515 articles). Assume data extraction will average 1 hour/article.
- ✓ **QA/QC (Blind)** – Assume that a second senior level technical expert will independently (blind) extract data from 20% of the articles reviewed by the first reviewer and that EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
 - ✓ **Optional QA/QC (Blind) Quantities** - Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will independently (blind) extract the data from 20% of the articles reviewed by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

Subtask 4.3. Systematic Literature Review - Male and Female Pubertal Assays

The purpose of this subtask is to identify published studies with data that can be used to support the EDSP, for a select set of chemicals provided by the EPA. Relevant literature will cover studies with the potential to be like the EPA's EDSP Tier 1 male and female pubertal (OCSPP test guidelines 890.1450 that can be used in the performance-based validation of high throughput (HTP) assays and computational models for the estrogen, androgen, and thyroid pathways. EPA is working toward using HTP assays and models as alternatives to the current *in vitro* and *in vivo* assays in the Endocrine Disruptor Screening Program's Tier 1 battery.

The contractor shall provide at least **two (2) senior technical experts** (e.g., P3 or P4), with experience in mammalian toxicity assessment, e.g., EPA's reproductive, developmental, and/or endocrine disruption test guideline studies, especially vertebrate HPG and HPT axes, shall independently perform the abstract screening, full-text screening and data extraction of each article using the templates provided by TO COR.

1. The reviewers shall conduct title/abstract screening, full-text screening & data extraction as defined for this Task on articles and data evaluation records identified by EPA.
2. Templates and workflows for title/abstract screening, full-text screening, and data extraction shall identified by EPA specifically for this project in the web-based systematic review literature review software.
3. QA/QC shall be blind, with optional quantities up to 100%. The Contractor may optionally identify a gold standard reviewer as part of the project team.

In response to the RFO, the contractor should base the labor hour quote for the systematic review of male and female pubertal studies, the contractor should assume the following:

1. **Two (2) senior level technical experts** (e.g., P3 or P4) with experience in mammalian toxicity assessment, e.g., EPA's reproductive, developmental, and/or endocrine disruption test guideline studies shall independently perform the full-text screening and data extraction of each article using the template provided by EPA.
2. **Assume reviewer calibration** using the Distiller™ software **is needed**. Assume that EPA will provide each Contractor senior level technical expert the same set of 5-15 articles to screen the data. One (1) or more EPA technical reviewers will be included in the reviewer calibration exercise.
3. **Full-text Screening.** Assume one (1) senior level technical expert will perform the full-text screening/preamble extraction of **108** articles. Assume full-text screening will average 15-20 minutes/article.
 - ✓ **QA/QC (Blind)** – Assume that a second senior level technical expert will independently (blind) screen 20% of the articles reviewed by the first reviewer and that EPA will conduct a

discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.

- ✓ **Optional QA/QC (Blind) Quantities** - Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will independently (blind) screen 20% of the articles screened by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

4. **Data Extraction.** Assume one (1) senior level technical expert will perform the data extraction of **30** articles. Assume data extraction will average 1 hour/article.

- ✓ **QA/QC (Blind)** – Assume that a second senior level technical expert will independently (blind) extract data from 20% of the articles reviewed by the first reviewer and that EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
- ✓ **Optional QA/QC (Blind) Quantities** - Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will independently (blind) extract the data from 20% of the articles reviewed by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

Subtask 4.4 Building Linear Systematic Review Screening, Extraction, Evaluation, and Evidence Integration Templates and Workflows.

The purpose of this subtask is to:

- support the development and implementation of linear systematic review title/abstract screening, full-text screening, data extraction, study quality evaluation, and evidence integration templates; and
- support the development of linear reviewer workflows (including QA/QC and calibration) in systematic review tools selected by EPA.

Specifically, the contractor shall:

1. Build systematic review templates in the web-based systematic literature review software chosen by EPA to meet the needs of the QA/QC, calibration, screening, extraction, evaluation, and integration needs of the EPA and Contractor scientific and project management staff associated with an EPA systematic review project;
2. Align the templates with external data formats and controlled vocabularies such as (but not limited to):
 - IUCLID (see for example, https://iuclid6.echa.europa.eu/documents/21812392/22307013/IUCLID+6_2.0.0_format.zip/dca3ad2d-796c-2faa-ec0d-d58cf1deb376)
 - OECD Harmonized Templates (<http://www.oecd.org/ehs/templates/>, including, but not limited to: OHT 48-2 & 75-3)
 - [Unified Medical Language System \(UMLS\)](#)
 - [AOPWiki](#)
 - [Medical Subject Headings](#) (MeSH)
3. Implement the templates in the web-based systematic literature review software chosen by EPA to

facilitate the review by scientific staff associated with a Systematic Review Project under this Task;
and

4. Extract and transform the data from the web-based systematic literature review software chosen by EPA into usable format for further statistical analysis, visualization, and/or storage in a chemical risk assessment/hazard repository such as (but not limited to) [IUCLID](#), [HAWC](#), or [ToxRefDB](#).
- 5.

For each Systematic Review Templates and Workflows Project initiated by technical directive under this subtask, the contractor shall provide at least:

1. One informatics expert with a background in programming in Python or other scripting language and relational database management (such as MySQL or PostgreSQL).
2. One scientific technical expert whose technical background is reviewed and approved by EPA (P2 or P3) whose expertise is relevant to the purposes of the intended systematic review project (such as mammalian or eco-toxicology). This expert shall work with EPA staff and the contractor informatics expert to:
 - translate EPA guidelines, standard evaluation procedures, data evaluation records, scientific literature, and scientific reviewer feedback into meaningful templates and workflows; and
 - map the proposed systematic review template to external formats and controlled vocabularies or ontologies.

The work and approaches of both the informatics and the scientific technical expert shall be reviewed by either a higher-tier expert of comparable expertise of the contractor or by EPA.

In response to the RFO, the contractor should base the labor hour quote for the systematic review of AMA studies on the following assumptions:

Assume that the contractor shall build systematic review full-text screening and data extraction templates and workflows for tasks 4.1, 4.2, and 4.3 in the DistillerSR collaborative tool that integrates information and ontologies from EPA data evaluation records, standard evaluation procedures, data entry spreadsheet templates^{3, 4}, IUCLID 6.3 database format^{5, 6}, OECD Harmonized Templates 48-2⁷ and 75-3⁸, and UMLS terminology⁹. Assume that the templates and workflows should maximize utilization of the available DistillerSR technologies and generate files from DistillerSR that can be easily imported into the IUCLID database system using i6z format.

Subtask 4.5 (OPTIONAL): Systematic Literature Reviews Relevant to the EDSP

The purpose of this optional subtask is to identify published studies with data that can be used to support the EDSP, for a select set of chemicals provided by the EPA. Relevant literature will cover studies with the potential to be similar to the EPA's EDSP Tier 1, Tier 2, other EPA or OECD guideline studies, or other EPA or scientific standard studies (such as the [thyroid comparative assay](#), aromatase assay, avian reproduction assay, and trout toxicity assays). The studies will be used in the performance-based validation of high throughput (HT) assays and

³ See <https://www.epa.gov/endocrine-disruption/standard-evaluation-procedures-seps-and-data-entry-spreadsheet-templates-depts>

⁴ <https://www.epa.gov/endocrine-disruption/endocrine-disruptor-screening-program-tier-1-screening-determinations-and>
⁵ <https://iuclid6.echa.europa.eu/>

⁶ <https://iuclid6.echa.europa.eu/format>

⁷ <http://www.oecd.org/ehs/templates/harmonised-templates-effects-on-biotic-systems.htm>

⁸ <http://www.oecd.org/ehs/templates/harmonised-templates-health-effects.htm>

⁹ <https://uts.nlm.nih.gov/home.html>

computational models for the estrogen, androgen, and thyroid pathways. EPA is working toward using HT assays and models as alternatives to the current in vitro and in vivo assays in the Endocrine Disruptor Screening Program's Tier 1 battery and to support endocrine relevant findings across the Agency.

If this option is exercised, the contractor shall provide at least **two (2) senior technical experts**, with experience relevant to the guideline or study basis under consideration.

If EPA exercises this optional subtask:

1. The reviewers shall conduct title/abstract screening, full-text screening, data extraction, study evaluation, and evidence integration as defined for this Task on articles and data evaluation records identified by EPA via technical direction.
2. Templates and workflows for title/abstract screening, full-text screening, data extraction, study evaluation, and evidence integration shall be identified by EPA via technical direction specifically for this project in the web-based systematic review literature review software.
3. QA/QC shall be blind, with optional quantities up to 100%. The Contractor may optionally identify a gold standard reviewer as part of the project team.

In response to the RFO, the contractor should base the labor hour quote for the systematic review for the Aromatase (Human Recombinant) (OSCPP test guidelines 890.1200) with additional *in vitro* assays measuring aromatase activity that can be used in the performance-based validation of high throughput (HTP) assays and computational models for the estrogen & androgen pathways on the following assumptions:

1. **Assume two (2) senior level technical experts** (e.g. P4 equivalent) with experience in aromatase assays (cell based and cell-free assays) and EPA's endocrine disruption test guideline studies (890 series) will perform the work. The contractor may identify additional senior level technical experts in order to complete the project within the period of performance.
2. **Assume reviewer calibration** using the Distiller™ software **is needed**. One (1) or more EPA technical reviewers will be included in the reviewer calibration exercises.
3. **Abstract/title screening.**
 - Assume a senior level technical expert will independently screen the title/abstract of approximately 1750 articles focusing on the Aromatase (Human Recombinant) (OSCPP test guidelines 890.1200) with additional *in vitro* assays measuring aromatase activity. Assume abstract/title screening will take 3-5 minutes per article.
 - **QA/QC (Blind)** – Assume that a second senior level technical expert will independently (blind) screen 20% of the title/abstracts reviewed by the first reviewer and that EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
 - **Optional QA/QC (Blind) Quantities** - Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will independently (blind) screen 20% of the title/abstracts screened by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

4. **Full text screening**

- **Assume at least one (1) senior level technical reviewer will review 583** articles for full text screening/preamble extraction. Assume full text screening will take 15 minutes/article.
- **QA/QC (Spot-Check)** – Assume that a second senior level technical expert will spot check 20% of the full text screening/preamble extractions performed by the first reviewer and that EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
- **Optional QA/QC (Spot-Check) Quantities** - Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will spot check 20% of the full text screening/preamble extractions performed by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

5. **Data extraction**

- **Assume at least one (1) senior level technical reviewer will review 437** (25% of the 1700 articles) articles for data extraction. Assume data extraction will take 1 hour per article.
- **QA/QC (Blind)** – Assume that a second senior level technical expert will independently (blind) screen 20% of the data extractions performed by the first reviewer and that EPA will conduct a discrepancy analysis of the results. If there are more than 5% discrepancies, EPA will evaluate the need for additional QA/QC and order optional quantities via technical directive.
- **Optional QA/QC (Blind) Quantities** – Assume EPA may order up to 4 optional quantities (up to 100% of the articles) via technical directive. Each optional quantity represents 20% of the articles reviewed by the first senior level technical expert. For each optional quantity, a second senior level technical expert will independently (blind) screen 20% of the full text screening/preamble extractions performed by the first reviewer. EPA will conduct a discrepancy analysis of the results to determine whether additional optional quantities are needed.

1.7 REPORTING REQUIREMENTS AND DELIVERABLES

The contractor shall provide the following deliverables listed in Table 1.

TABLE 1. DELIVERABLES AND SCHEDULE

Tasks	Deliverables	Due Dates
1	Task management ✓ Kick-off meeting within 2 weeks after the task order has been awarded. ✓ Monthly Progress Report (i.e. Technical/Progress Status Report and Financial Status Report) by the 15 th of each month (following completion of 1 st reporting period). ✓ Biweekly status meetings	

Tasks	Deliverables	Due Dates
	<ul style="list-style-type: none"> ✓ Other meetings as required by the TOCOR ✓ Email a copy to the CO, Contract level COR, TOCOR, and Alt TOCOR ✓ Immediately inform the TOCOR when any hours or costs for any task has exceeded or is expected to exceed the contractor estimate by >10%. ✓ Immediately inform the TOCOR of any problems that may impact the production, budget, and/or delivery of deliverables. ✓ The Contractor shall notify the TOCOR when 75% of the Government approved hours or approved LH costs have been incurred (including unbilled hours and costs). 	
2	EPA Requirements for Quality Assurance Project Plans (QA/R- 5) https://www.epa.gov/quality/epa-qar-5-epa-requirements-quality-assurance-project-plans <ul style="list-style-type: none"> ✓ Draft QAPP ✓ Final QAPP 	<ul style="list-style-type: none"> ✓ Email to Contract-level COR and respective TOCOR and Alt TOCOR ✓ Draft QAPP: submitted with technical proposal ✓ Final QAPP: 7-10 days after receiving comments from EPA TOCOR comments
3	Data Analysis and Statistical Support	TBD by technical directive
4	Linear Pathway Systematic Reviews	TBD by technical directive

1.8 ACCEPTABLE QUALITY LEVEL FOR TASKS

See Attachment 1: Quality Assurance Surveillance Plan

1.9 PERIOD OF PERFORMANCE

The period of performance of this task order is:

- Base: 12 months from award date
- Option 1: 12 months from option exercise
- Option 2: 12 months from option exercise
- Option 3: 12 months from option exercise

1.10 PLACE OF PERFORMANCE

Work may be performed off-site.

1.11 PERSONNEL

The Contractor is responsible for providing personnel with the necessary level expertise to support the task activities and requirement in this PWS.

1.12 TASK ORDER TYPE: TIME & MATERIALS OR FIRM FIXED PRICE

1.13 GOVERNMENT FURNISHED EQUIPMENT (GFE)

In accordance with FAR 45.102, the contractor shall furnish all property required for performing Government contracts. If a contractor believes that Government property is required for performance of the contract, the contractor shall submit a written request to the CO. For cost purposes, assume that EPA shall provide an office phone with voicemail, and e-mail for approved personnel working in OSCP-space to complete work under Task 3 of this task order.

1.14 TRAVEL

The Contractor may be required to travel during the performance of this task order. The Contractor is required to follow the requirements of subpart 31.2 of the FAR regulations in incurring allowable travel costs under this task order, and correspondingly must always seek and obtain government rates whenever available and observe current subsistence ceilings.

1.15 TRAINING

EPA-H-31-105 APPROVAL OF TRAINING [see Section H.22 of the IDIQ contract]

(a) The contractor shall provide and maintain a qualified staff of personnel to meet the requirements of the Performance Work Statement. The contractor shall provide training to keep its personnel abreast of changes to the science and/or technology associated with the requirements of the contract. In addition, the contractor shall ensure that its personnel receive appropriate safety, health and environmental training in accordance with Federal, state and local requirements prior to assigning any task that require such training. The contractor shall provide documentation of such training upon the request of the Contract-Level COR and/or Contracting Officer.

The Government will not directly reimburse the cost for contractor employees to meet or maintain minimal contract requirements or to obtain and sustain an appropriate level of professionalism. Any direct charges for training will only be considered for reimbursement under this contract by compliance with the procedures set forth in paragraph (b) (see Section H.22 of the IDIQ contract).

2 INSPECTION AND ACCEPTANCE

QUALITY ASSURANCE PROJECT PLAN (SEE TASK 2 ABOVE)

The Contractor shall submit a draft QAPP per EPA Requirements for Quality Assurance Project Plans (QA/R-5) (Table 2).

Table 2. Quality Assurance Project Plan

	Documentation	Specifications	Due
X	Quality Assurance Project Plan for the Task Order	EPA Requirements for Quality Assurance Project Plans (QA/R- 5) (dated 3//20/2011) https://www.epa.gov/quality/e-pa-qar-5-epa-requirements-quality-assurance-project-plans	DRAFT: As stated in the RFP for the task order FINAL: 7-10 days following receipt of the TOCOR's comments on the DRAFT QAPP

3 TASK ORDER ADMINISTRATION DATA

3.1 CONTRACT ADMINISTRATION REPRESENTATIVES

- Contracting Officer: Jody Gosnell, Team Leader OAS/HQAD
- Contract Specialist: Eric Ward, OAS/HQAD
- Contract Level Contracting Officer's Representative: Sharlene Matten, OSCP/EACPD
- Task Order Contracting Officer's Representative: Kristan Markey, OSCP/EACPD

3.2 TASK ORDER CLAUSES

INVOICING

Invoices shall be submitted in accordance with contract clause G.3 EPAAR 1552.232-70 SUBMISSION OF INVOICES. (JUN 1996) - ALTERNATE I (JUN 1996).

4.2 FAR 52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)

- (a) The Government may extend the term of this task order by written notice to the Contractor within 5 calendar days before the expiration of this task order; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 30 days before the contract expires. The preliminary notice does not commit the Government to an extension.
- (b) If the Government exercises this option, the extended task order shall be considered to include this option clause.
- (c) The total duration of this task order, including the exercise of any options under this clause, shall not exceed 60 months.

3.3 EPA-J-52-101 LIST OF ATTACHMENTS

Attachment 1: QUALITY ASSURANCE SURVEILLANCE PLAN

3.4 INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS

EPA-L-36-101 RFTOP PROPOSAL INSTRUCTIONS

The offeror's response shall not exceed 15 double sided pages each and shall include all charts, illustrations, etc. This limitation does not include resumes. Font size: must be 11 points or larger (smaller text in figures, graphs, diagrams and charts is acceptable as long as it is legible when the page is viewed at 100%).

(a) TECHNICAL PROPOSAL INSTRUCTIONS:

- (1) The technical proposal shall be complete and demonstrate an understanding of the work to be provided and the contractor's ability to perform the work in accordance with PWS. The technical proposal shall address all of the technical evaluation criteria presented in this section.
- (2) Each section of the proposal shall be titled.
- (3) Subcontractors

Each offeror shall list in a table format the name and addresses of all subcontractors who will perform work or labor or render services to the offeror for compensation in an amount in excess of one percent of the offeror's total price. Each offeror shall show on the table the portion of the work to be done by each subcontractor. This table shall be included with the technical proposal. The table shall include: (a) the name and address of the subcontractor, (b) a short description of the work the subcontractor will be designated to perform or deliver, (c) the portion in percent of the work (LOE) the subcontractor will be designated to perform or deliver.

(4) Conflict of Interest

- Vendors shall provide a completed version of the certification at EPA-H-09-106 task order conflict of interest certification as part of its Technical Proposal. The complete certification will not count against the page limitations for the Technical Proposal.
- Consistent with the terms of the prime contract, vendors shall disclose any actual or potential conflict of interest to the Contracting Officer within 7 days after receipt of the Request for Task Order Proposal. The disclosure shall include a description of actions which the Contractor has taken or proposes to take, after consultation with the Contracting Officer, to avoid, mitigate, or neutralize the actual or potential conflict of interest.
- For the purposes of this RFP, EPA believes an actual or potential conflict of interest may exist. In order to properly manage the major projects, the Office will use this task order to supplement its Program Management (PM) resources. PM support provided by contractors includes the roles of Project Status/Reporting, Earned Value Management, Risk Management, and Quality Management. In addition, PM support may include assistance in acquisition planning. Because of the sensitive nature of some of these activities and the requirement that the Contractor provide independent reviews of such things as EVM reports, identified risks, and QASP assessments, the following preclusions shall apply for the period of performance of this procurement, including the base and any exercised option years:

(b) TECHNICAL EVALUATION CRITERIA

Technical Evaluation Factors listed below are of equal importance.

Factor 1 – Technical Approach: The Contractor shall propose their Technical Approach for accomplishing the objectives, requirements, and tasks and subtasks of the task order.

Factor 2 – Staffing Approach: The Contractor shall describe their staffing approach in the form of a Staffing Plan. The Plan shall describe the role and level of involvement of each proposed team member in implementing the required tasks.

(c) COST PROPOSAL

Instructions:

The purpose of these cost instructions is to assist offerors in submitting information required to evaluate the reasonableness of proposed costs. All dollar amounts provided shall be rounded to the nearest dollar. The labor rates used for this task order shall not exceed the labor rates included in the base IDIQ contract. However, EPA will accept discounted rates.

Travel costs shall not exceed \$2,000 per year. Contractors are encouraged to use public transportation.

ATTACHMENT 1

QUALITY ASSURANCE SURVEILLANCE PLAN

QUALITY ASSURANCE SURVEILLANCE PLAN

PERFORMANCE REQUIREMENT	PERFORMANCE MEASURE (PM)	PERFORMANCE STANDARD	SURVEILLANCE METHOD	INCENTIVES & DISINCENTIVES
<p><u>MANAGEMENT AND COMMUNICATION:</u></p> <p>The contractor shall maintain contact with the EPA CO, COR, and TOCOR throughout the performance of the contract.</p>	<p>Contractor shall immediately bring potential problems to the appropriate EPA personnel and shall recommend actions that would mitigate or resolve the problem.</p>	<p>Issues that impact project schedules and costs shall be brought to the attention of the EPA within 3-days of occurrence.</p>	<p>All active task orders will be reviewed by the EPA to identify unreported issues.</p>	<p>Performance will be considered in the award of subsequent task orders and will be factored into the annual evaluation of Business Relations in the Contractor Performance Assessment Reporting System (CPARS).</p>
<p><u>TIMELINESS:</u></p> <p>For every Task Order awarded establishing a firm, specific delivery date for the generation of a report, the contractor shall deliver such report to the COR, TOCOR and CO no later than the time specified in the order's PWS.</p>	<p>Deliverables and related work must comply with contractual timeliness requirements. The contractor will be evaluated on its responsiveness to all task orders.</p>	<p>95% of all deliverables and related work shall be completed on time within task schedule and/or tech. direction requirements.</p>	<p>100% inspection of all deliverables and related work by the TOCOR; TOCOR will document the timeliness of all work requirements.</p>	<p>Performance will be considered in the award of subsequent task orders and will be factored into the annual evaluation of Timeliness in the Contractor Performance Assessment Reporting System (CPARS).</p>
<p><u>TECHNICAL QUALITY:</u></p> <p>For every task order awarded, the analyses conducted by the contractor shall be factual, defensible, credible, and based on sound scientific methods. All data shall be collected from reputable sources and quality assurance measures shall be conducted in accordance with the agency requirements outlined in the task orders.</p>	<p>All deliverables and related work must be complete, accurate, thorough, and professionally credible.</p>	<p>Data are 100% accurate; review demonstrates a high level of expertise and credibility with regard to personnel and use of scientific methodology. Task Orders shall be conducted in strict conformance with approved QA plans. Outputs shall withstand internal review by the US EPA and outside scientific reviewers.</p>	<p>EPA Staff will conduct secondary reviews of work completed by the contractor. Feedback will be provided.</p>	<p>Performance will be considered in the award of subsequent task orders and will be factored into the annual evaluation in the category of Quality of Product or Service in the Contractor Performance Assessment Reporting System (CPARS).</p>

TASK ORDER CLAUSES

Period of Performance

The period of performance of this task order is 09/24/2019 – 09/23/2022

Submission of Invoices

Invoices shall be submitted in accordance with EPAAR 1552.232-70 SUBMISSION OF INVOICES. (JUN 1996) - ALTERNATE I (JUN 1996). See address below.

RTP Finance Center

US Environmental Protection Agency

RTP-Finance Center (AA216-01)

109 TW Alexander Drive

www2.epa.gov/financial/contracts

Durham NC 27711

E.2 Period of Performance

Base:	12 months from award date
Option 1:	12 months from option exercise
Option 2:	12 months from option exercise
Option 3:	12 months from option exercise

F. TASK ORDER TYPE

Time and materials & Firm Fixed Price

G. INSPECTION AND ACCEPTANCE

G.1 Quality Assurance Project Plan

The contractor shall submit the following quality system documentation to the CO at the time frames identified below:

Documentation	Specifications	Due
Quality Assurance		
Project Plan for the Task		
Order	EPA Requirements for Quality Assurance Project Plans (QA/R-5) [dated03/20/11]	Task Order proposal due date

This documentation can be found on the following EPA website –

<https://www.epa.gov/quality/epa-qar-5-epa-requirements-quality-assurance-project-plans>

This documentation will be prepared in accordance with the specifications identified above or equivalent specifications defined by EPA.

The Government will review and return the quality documentation, with comments, and indicating approval or disapproval. If necessary, the contractor shall revise the documentation to address all comments and shall submit the revised documentation to the government for approval.

The contractor shall not commence work involving environmental data generation or use until the Government has approved the quality documentation.

H. TASK ORDER ADMINISTRATION DATA

H.1 Contract Administration Representatives

Contracting Officer: Jody Gosnell, Gosnell.jody@epa.gov

Contracting Officer's Representative: Sharlene Matten, matten.sharlene@epa.gov

I. INVOICING

Invoices shall be submitted in accordance with contract clause G.3 EPAAR 1552.232-70

SUBMISSION OF INVOICES. (JUN 1996) - ALTERNATE I (JUN 1996).

J. TASK ORDER CLAUSES

Local Clauses EPA-H-42-102 UTILIZATION OF FEDCONNECT FOR CONTRACT

ADMINISTRATION

EPA will utilize the FedConnect® web portal in administering this contract. The contractor must be registered in FedConnect® and have access to the FedConnect website located at <https://www.fedconnect.net/Fedconnect/>. For assistance in registering or for other FedConnect® technical questions please call the FedConnect® Help Desk at (800) 899-6665 or email at support@fedconnect.net.

FAR 52.216-18 ORDERING. (OCT 1995)

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from **09/24/2019** through **09/23/2023**.

(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.

(c) If mailed, a delivery order or task order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

FAR 52.216-19 ORDER LIMITATIONS. (OCT 1995)

(a) *Minimum order.* When the Government requires supplies or services covered by this contract in an amount of less than \$10,000.00, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) *Maximum order.* The Contractor is not obligated to honor-

(1) Any order for a single item in excess of \$4.5 Million;

(2) Any order for a combination of items in excess of \$4.5 Million; or

(3) A series of orders from the same ordering office within 7 days that together call for quantities exceeding the limitation in subparagraph (b)(1) or (2) above.

(c) If this is a requirements contract (*i.e.*, includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR)), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in paragraph (b) above.

(d) Notwithstanding paragraphs (b) and (c) above, the Contractor shall honor any order exceeding the

maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within 3 days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

FAR 52.217-8 OPTION TO EXTEND SERVICES. (NOV 1999)

The Government may require continued performance of any services within the limits and at the rates specified in the contract. These rates may be adjusted only as a result of revisions to prevailing labor rates provided by the Secretary of Labor. The option provision may be exercised more than once, but the total extension of performance hereunder shall not exceed 6 months. The Contracting Officer may exercise the option by written notice to the Contractor within 30 days before the contract expires.

FAR 52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)

- (a) The Government may extend the term of this contract by written notice to the Contractor within 30 days; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.
- (b) If the Government exercises this option, the extended contract shall be considered to include this option clause.
- (c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 36 months.

LOCAL CLAUSE - EPA-B-32-103A - LIMITATION OF GOVERNMENT'S OBLIGATION

- (a) Severable services may be incrementally funded. Non-severable services shall not be incrementally funded. Contract

line items 1 through 32 are severable and may be incrementally funded. For these items, the sum of \$835,597.00 of the total price is presently available for payment and allotted to this contract.

- (b) For items identified in paragraph (a) of this clause, the Contractor agrees to perform up to the point at which the total amount payable by the Government, including reimbursement in the event of termination of those items for the Government's convenience, approximates the total amount currently allotted for those items to the contract. The Contractor shall not continue work on those items beyond that point. Subject to the clause entitled, "Termination for Convenience of the Government," the Government will not be obligated, under any circumstances, to reimburse the Contractor in excess of the amount payable by the Government in the event of the termination of applicable contract line items for convenience including costs, profit, and estimated termination costs for those line items.

- (c) Notwithstanding the dates specified in the allotment schedule in paragraph (h) of this clause, the Contractor will notify the Contracting Officer, in writing, at least 5 days prior to the date when, in the Contractor's best judgment, the work will reach the point at which the total amount payable by the Government, including any cost for termination for convenience, will approximate 85% of the total amount currently allotted to the contract for performance of the applicable items. The notification will state (1) the estimated date when that point will be reached and (2) an estimate of additional funding, if any, needed to continue performance of the applicable line items up to the next scheduled date for the allotment of funds identified in paragraph (a) of this clause, or to a substitute date as determined by the Government pursuant to paragraph (d) of this clause. If, after such notification, additional funds are not allotted by the date identified in the Contractor's notification, or by an agreed

substitute date, the Contracting Officer will terminate any item(s) for which additional funds have not been allotted, pursuant to the clause entitled "Termination for Convenience of the Government."

(d) The parties contemplate that, subject to the availability of appropriations, the Government may allot additional funds for continued performance of the contract line items identified in paragraph (a) of this clause and will determine the estimated period of contract performance which will be covered by the funds. If additional funds are allotted, the Contracting Officer will notify the Contractor in writing. The Contractor shall not resume performance of the contract line items identified in paragraph (a) until the written notice is received. The provisions of paragraphs (b) through (d) of this clause will apply in like manner to the additional allotted funds and to the new estimated period of contract

performance. The contract will be modified accordingly.

(e) The Government may, at any time prior to termination, allot additional funds for the performance of the contract line items identified in paragraph (a) of this clause.

(f) The termination provisions of this clause do not limit the rights of the Government under the clause entitled "Default". The provisions of this clause are limited to the work and allotment of funds for the contract line items set forth in paragraph (a) of this clause. This clause no longer applies once the contract is fully funded.

(g) Nothing in this clause affects the right of the Government to otherwise terminate this contract pursuant to the contract clause entitled "Termination for Convenience of the Government".

(h) The parties contemplate that the Government may obligate funds to this contract in accordance with the following schedule:

RECAPITULATION:

	PRIOR AMOUNT	THIS MOD	NEW AMOUNT
BASE PERIOD			
Total Maximum Amount:	\$0.00	\$0.00	\$3,591,374.00
Funded Amount:	\$0.00	\$0.00	\$854,197.00

(End of clause)

FAR 52.252-2 CLAUSES INCORPORATED BY REFERENCE. (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. The full text of a clause may be accessed electronically at this/these address(es): FAR: <http://farsite.hill.af.mil/vmfara.htm> ; EPAAR: <http://farsite.hill.af.mil/vmepaara.htm>

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE OF PAGES	
						1 9	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00003		See Block 16C		PR-OCSP-20-00362			
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
CAD							
US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x) 9A. AMENDMENT OF SOLICITATION NO.			
BATTELLE MEMORIAL INSTITUTE Attn: Brian Panoff 505 KING AVE COLUMBUS OH 432012693							
				9B. DATED (SEE ITEM 11)			
				x 10A. MODIFICATION OF CONTRACT/ORDER NO.			
				68HE0H18D0009			
				68HERH19F0400			
				10B. DATED (SEE ITEM 13)			
				09/25/2019			
CODE 007901598		FACILITY CODE					
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)				Net Increase:		\$560,873.00	
See Schedule							
13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
	D. OTHER (Specify type of modification and authority)						
X	IAW FAR 52.217-9, Option to Extend the Term of the Contract						
E. IMPORTANT: Contractor <input type="checkbox"/> is not <input checked="" type="checkbox"/> is required to sign this document and return <u>1</u> copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 007901598 ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task Order: Technical Support for Data Analysis/Management and Linear Systematic Literature Reviews TOCOR: Kristan Markey Max Expire Date: 09/27/2023 Invoice Approver: Kristan Markey Alt Invoice App: Scott Lynn The purpose of this bilateral Modification P00003, as detailed on pages 5 through 9 of this document, is to:							
1. Exercise Option Period 1 under Contract Line Item Numbers (CLINs) 0002, 0012, 0013, 0014, 0015, 0016, 0017, and 0018, with a period of performance from September 25, 2020 to September 24, 2021; Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Kathleen Rechenberg			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
				Kathleen Rechenberg (Signature of Contracting Officer)		ELECTRONIC SIGNATURE 09/23/2020	
(Signature of person authorized to sign)							

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED 68HE0H18D0009/68HERH19F0400/P00003	PAGE	OF
		2	9

NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>2. Incrementally fund CLIN 0002 in the amount of \$335,058.00; and</p> <p>3. Fully fund CLIN 0018 in the amount of \$225,815.00.</p> <p>All other terms and conditions remain unchanged and in full force and effect.</p> <p>LIST OF CHANGES: Reason for Modification: Exercise an Option Period Of Performance End Date changed from 24-SEP-23 to 24-SEP-21 Obligated Amount for this Modification: \$560,873.00 New Total Obligated Amount for this Award: \$1,415,070.00</p> <p>CHANGES FOR LINE ITEM NUMBER: 0002 Obligated Amount for this Modification: \$335,058.00 Incremental Funded Amount changed from \$0.00 to \$335,058.00 Exercised option</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 20-21-B-C2A00EA-000C54-2505-20C2CPE012-001 Beginning FiscalYear 20 Ending Fiscal Year 21 Fund (Appropriation) B Budget Organization C2A00EA Program (PRC) 000C54 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 20C2CPE012-001 Quantity: 0 Amount: \$335,058.00 Percent: 0 Subject To Funding: N Payment Address: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711</p> <p>Continued ...</p>				

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	68HE0H18D0009/68HERH19F0400/P00003	3	9

NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	CHANGES FOR LINE ITEM NUMBER: 0012 Exercised option CHANGES FOR LINE ITEM NUMBER: 0013 Exercised option CHANGES FOR LINE ITEM NUMBER: 0014 Exercised option CHANGES FOR LINE ITEM NUMBER: 0015 Exercised option CHANGES FOR LINE ITEM NUMBER: 0016 Exercised option CHANGES FOR LINE ITEM NUMBER: 0017 Exercised option CHANGES FOR LINE ITEM NUMBER: 0018 Obligated Amount for this Modification: \$225,815.00 Exercised option NEW ACCOUNTING CODE ADDED: Account code: 20-21-B-C2A00EA-000C54-2505-20C2CPE012-001 Beginning FiscalYear 20 Ending Fiscal Year 21 Fund (Appropriation) B Budget Organization C2A00EA Program (PRC) 000C54 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 20C2CPE012-001 Quantity: 0 Amount: \$225,815.00 Percent: 0 Subject To Funding: N Payment Address: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Continued ...				

NAME OF OFFEROR OR CONTRACTOR
 BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Period of Performance: 09/25/2019 to 09/24/2021				

**ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task
Order: Technical Support for Data Analysis/Management and Linear Systematic
Literature Reviews**

Contract: 68HE0H18D0009, Task Order: 68HERH19F0400, Modification P00003

Procurement Management Roles

Task Order Contracting Officer's Representative (TOCOR):

Kristan Markey
USEPA
1201 Constitution Ave NW
Mail Code: 7203M
Washington, DC 20004
Phone: 202-564-8716
Email: Markey.Kristan@epa.gov

Alternate TOCOR:

Scott Lynn
USEPA
1201 Constitution Ave NW
Mail Code: 4106L
Washington, DC 20004
Phone: 202-564-2631
Email: Lynn.Scott@epa.gov

Contracting Officer

Sean Gifford
USEPA
26 West Martin Luther King Drive
Mail Code: W136A
Cincinnati, OH 45268
Phone: 513-487-2506
Email: Gifford.Sean@epa.gov

I. Purpose of Modification:

The purpose of Modification P00003 to this task order is to:

1. Exercise Option Period 1 under Contract Line Item Numbers (CLINs) 0002, 0012, 0013, 0014, 0015, 0016, 0017, and 0018, with a period of performance from September 25, 2020 to September 24, 2021;
2. Incrementally fund CLIN 0002 in the amount of \$335,058.00; and
3. Fully fund CLIN 0018 in the amount of \$225,815.00.

All other terms and conditions remain unchanged and in full force and effect.

II. Limitation of Government's Obligation - EPA Clause EPA-B-32-103:

- (a) Severable services may be incrementally funded. Non-severable services shall not be incrementally funded. Contract line items **0001 through 0032** are severable and may be incrementally funded. For these items, the sum of **\$1,415,070.00 (detailed below)** of the total price is presently available for payment and allotted to this contract.
- (b) For items identified in paragraph (a) of this clause, the Contractor agrees to perform up to the point at which the total amount payable by the Government, including reimbursement in the event of termination of those items for the Government's convenience, approximates the total amount currently allotted for those items to the contract. The Contractor shall not continue work on those items beyond that point.

**ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task
Order: Technical Support for Data Analysis/Management and Linear Systematic
Literature Reviews**

Contract: 68HE0H18D0009, Task Order: 68HERH19F0400, Modification P00003

Subject to the clause entitled "Termination for Convenience of the Government," the Government will not be obligated, under any circumstances, to reimburse the Contractor in excess of the amount payable by the Government in the event of the termination of applicable contract line items for convenience including costs, profit, and estimated termination costs for those line items.

- (c) Notwithstanding the dates specified in the allotment schedule in paragraph (h) of this clause, the Contractor will notify the Contracting Officer, in writing, at least **15 days** prior to the date when, in the Contractor's best judgment, the work will reach the point at which the total amount payable by the Government, including any cost for termination for convenience, will approximate **75 percent** of the total amount currently allotted to the contract for performance of the applicable items. The notification will state (1) the estimated date when that point will be reached and (2) an estimate of additional funding, if any, needed to continue performance of the applicable line items up to the next scheduled date for the allotment of funds identified in paragraph (a) of this clause, or to a substitute date as determined by the Government pursuant to paragraph (d) of this clause. If, after such notification, additional funds are not allotted by the date identified in the Contractor's notification, or by an agreed substitute date, the Contracting Officer will terminate any item(s) for which additional funds have not been allotted, pursuant to the clause entitled "Termination for Convenience of the Government."
- (d) The parties contemplate that, subject to the availability of appropriations, the Government may allot additional funds for continued performance of the contract line items identified in paragraph (a) of this clause and will determine the estimated period of contract performance which will be covered by the funds. If additional funds are allotted, the Contracting Officer will notify the Contractor in writing. The Contractor shall not resume performance of the contract line items identified in paragraph (a) until the written notice is received. The provisions of paragraphs (b) through (d) of this clause will apply in like manner to the additional allotted funds and to the new estimated period of contract performance. The contract will be modified accordingly.
- (e) The Government may, at any time prior to termination, allot additional funds for the performance of the contract line items identified in paragraph (a) of this clause.
- (f) The termination provisions of this clause do not limit the rights of the Government under the clause entitled "Default". The provisions of this clause are limited to the work and allotment of funds for the contract line items set forth in paragraph (a) of this clause. This clause no longer applies once the contract is fully funded.
- (g) Nothing in this clause affects the right of the Government to otherwise terminate this contract pursuant to the contract clause entitled "Termination for Convenience of the Government".

**ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task
Order: Technical Support for Data Analysis/Management and Linear Systematic
Literature Reviews**

Contract: 68HE0H18D0009, Task Order: 68HERH19F0400, Modification P00003

- (h) The parties contemplate that the Government may obligate funds to this contract in accordance with the following schedule:

**Funding is typically provided covering two months at a time. These amounts may vary, however, higher or lower.

Recapitulation of Pricing

Line Item Pricing for Base Period	
Line Item 0001	\$617,436.00
Line Item 0005	\$4,558.00
Line Item 0006	\$2,453.00
Line Item 0007	\$4,558.00
Line Item 0008	\$2,453.00
Line Item 0009	\$2,935.00
Line Item 0010	\$1,643.00
Line Item 0011	\$218,161.00
Total Price for the Base Period:	\$854,197.00

Line Item Pricing for Option Period 1	
Line Item 0002	\$637,083.00
Line Item 0012	\$4,697.00
Line Item 0013	\$2,530.00
Line Item 0014	\$4,697.00
Line Item 0015	\$2,530.00
Line Item 0016	\$3,040.00
Line Item 0017	\$1,703.00
Line Item 0018	\$225,815.00
Total Price for Option Period 1:	\$882,095.00

Line Item Pricing for Option Period 2	
Line Item 0003	\$659,554.00
Line Item 0019	\$4,843.00
Line Item 0020	\$2,610.00
Line Item 0021	\$4,843.00
Line Item 0022	\$2,610.00
Line Item 0023	\$3,153.00
Line Item 0024	\$1,765.00
Line Item 0025	\$234,289.00
Total Price for Option Period 2:	\$913,667.00

Line Item Pricing for Option Period 3	
Line Item 0004	\$679,388.00
Line Item 0026	\$4,980.00
Line Item 0027	\$2,685.00
Line Item 0028	\$4,980.00
Line Item 0029	\$2,685.00
Line Item 0030	\$3,252.00
Line Item 0031	\$1,822.00
Line Item 0032	\$241,623.00
Total Price for Option Period 3:	\$941,415.00

Total Price for All Periods:	\$3,591,374.00
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Funding for Period of Performance

**ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task
Order: Technical Support for Data Analysis/Management and Linear Systematic
Literature Reviews**

Contract: 68HE0H18D0009, Task Order: 68HERH19F0400, Modification P00003

Funded at Task Order Award

Line Item 0001	\$617,436.00
Line Item 0005	\$4,558.00
Line Item 0006	\$2,453.00
Line Item 0007	\$4,558.00
Line Item 0008	\$2,453.00
Line Item 0009	\$2,935.00
Line Item 0010	\$1,643.00
Line Item 0011	\$218,161.00
Total Funded at Task Order Award:	\$854,197.00

Funded via Modification P00003

Line Item 0002	\$335,058.00
Line Item 0012	\$0.00
Line Item 0013	\$0.00
Line Item 0014	\$0.00
Line Item 0015	\$0.00
Line Item 0016	\$0.00
Line Item 0017	\$0.00
Line Item 0018	\$225,815.00
Total Funded via Modification P00003:	\$560,873.00

Total Funding by Period of Performance

Funded for the Base Period

Line Item 0001	\$617,436.00
Line Item 0005	\$4,558.00
Line Item 0006	\$2,453.00
Line Item 0007	\$4,558.00
Line Item 0008	\$2,453.00
Line Item 0009	\$2,935.00
Line Item 0010	\$1,643.00
Line Item 0011	\$218,161.00
Total Funded for the Base Period:	\$854,197.00

Funded for Option Period 1

Line Item 0002	\$335,058.00
Line Item 0012	\$0.00
Line Item 0013	\$0.00
Line Item 0014	\$0.00
Line Item 0015	\$0.00
Line Item 0016	\$0.00
Line Item 0017	\$0.00
Line Item 0018	\$225,815.00
Total Funded for Option Period 1:	\$560,873.00

Funded for Option Period 2

Line Item 0003	\$0.00
Line Item 0019	\$0.00
Line Item 0020	\$0.00
Line Item 0021	\$0.00
Line Item 0022	\$0.00
Line Item 0023	\$0.00
Line Item 0024	\$0.00

**ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task
Order: Technical Support for Data Analysis/Management and Linear Systematic
Literature Reviews**

Contract: 68HE0H18D0009, Task Order: 68HERH19F0400, Modification P00003

Line Item 0025	\$0.00
Total Funded for Option Period 2:	\$0.00

Funded for Option Period 3

Line Item 0004	\$0.00
Line Item 0026	\$0.00
Line Item 0027	\$0.00
Line Item 0028	\$0.00
Line Item 0029	\$0.00
Line Item 0030	\$0.00
Line Item 0031	\$0.00
Line Item 0032	\$0.00
Total Funded for Option Period 3:	\$0.00

Balance to be Funded by Program Office

Line Item 0001	\$0.00
Line Item 0002	\$302,025.00
Line Item 0003	\$659,554.00
Line Item 0004	\$679,388.00
Line Item 0005	\$0.00
Line Item 0006	\$0.00
Line Item 0007	\$0.00
Line Item 0008	\$0.00
Line Item 0009	\$0.00
Line Item 0010	\$0.00
Line Item 0011	\$0.00
Line Item 0012	\$4,697.00
Line Item 0013	\$2,530.00
Line Item 0014	\$4,697.00
Line Item 0015	\$2,530.00
Line Item 0016	\$3,040.00
Line Item 0017	\$1,703.00
Line Item 0018	\$0.00
Line Item 0019	\$4,843.00
Line Item 0020	\$2,610.00
Line Item 0021	\$4,843.00
Line Item 0022	\$2,610.00
Line Item 0023	\$3,153.00
Line Item 0024	\$1,765.00
Line Item 0025	\$234,289.00
Line Item 0026	\$4,980.00
Line Item 0027	\$2,685.00
Line Item 0028	\$4,980.00
Line Item 0029	\$2,685.00
Line Item 0030	\$3,252.00
Line Item 0031	\$1,822.00
Line Item 0032	\$241,623.00
Total Balance to be Funded by Program Office:	\$2,176,304.00

Total Task Order Amount (w/ options):	\$3,591,374.00
Total Task Order Amount (w/o options):	\$1,736,292.00
Total Funded Amount:	\$1,415,070.00

END OF DOCUMENT

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE 1 OF 7 PAGES	
2. AMENDMENT/MODIFICATION NO. P00004		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
6. ISSUED BY CAD		CODE CAD		7. ADMINISTERED BY (If other than Item 6)		CODE	
US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) Battelle Memorial Institute Attn: Kelly Landolfi 505 KING AVE COLUMBUS OH 432012696				(x)			
				9A. AMENDMENT OF SOLICITATION NO.			
				9B. DATED (SEE ITEM 11)			
				x 10A. MODIFICATION OF CONTRACT/ORDER NO. 68HE0H18D0009 68HERH19F0400			
CODE 007901598		FACILITY CODE		10B. DATED (SEE ITEM 13) 09/25/2019			

NAME OF OFFEROR OR CONTRACTOR
 Battelle Memorial Institute

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Reason for Modification: Other Administrative Action Clause titled "FAR 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment. (AUG 2020)" is incorporated by reference. Payment: Period of Performance: 09/25/2019 to 09/24/2021				

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE OF PAGES	
2. AMENDMENT/MODIFICATION NUMBER		3. EFFECTIVE DATE 08/13/2020		4. REQUISITION/PURCHASE REQUISITION NUMBER		5. PROJECT NUMBER (If applicable)	
6. ISSUED BY Raoul D. Scott, Director OMS/ARM/OAS/Policy, Training and Oversight Division US Environmental Protection Agency, Mail Code 3802R 1200 Pennsylvania Avenue, NW Washington, DC 20004		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
8. NAME AND ADDRESS OF CONTRACTOR (Number, street, county, State and ZIP Code) To All EPA Contractors				<input checked="" type="checkbox"/>		9A. AMENDMENT OF SOLICITATION NUMBER	
				<input type="checkbox"/>		9B. DATED (SEE ITEM 11)	
				<input checked="" type="checkbox"/>		10A. MODIFICATION OF CONTRACT/ORDER NUMBER To all EPA Contracts and Orders	
				<input type="checkbox"/>		10B. DATED (SEE ITEM 13)	
CODE		FACILITY CODE					

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:
 (a) By completing items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NUMBER AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NUMBER IN ITEM 10A.
<input type="checkbox"/>	
<input checked="" type="checkbox"/>	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
<input type="checkbox"/>	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
<input type="checkbox"/>	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☒ is not ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

This contract/order is being modified in accordance with the applicability instructions in interim FAR Case 2019-009, and FAR 4.2105, requiring contracting officers to include FAR clause 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

See attached for the full text version of FAR 52.204-25. Contractor Acknowledgment of receipt required.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Raoul D. Scott, Director Policy, Training and Oversight Division	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA RAOUL SCOTT Digitally signed by RAOUL SCOTT Date: 2020.07.30 11:40:17 -04'00'	16C. DATE SIGNED
(Signature of person authorized to sign)		(Signature of Contracting Officer)	

Previous edition unusable

STANDARD FORM 30 (REV. 11/2016)
Prescribed by GSA FAR (48 CFR) 53.243

52.204-25 Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

As prescribed in 4.2105(b) and in the applicability instructions in interim FAR Case 2019-009, insert the following clause:

Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment (Aug 2020)

(a) Definitions. As used in this clause—

Backhaul means intermediate links between the core network, or backbone network, and the small subnetworks at the edge of the network (e.g., connecting cell phones/towers to the core telephone network). Backhaul can be wireless (e.g., microwave) or wired (e.g., fiber optic, coaxial cable, Ethernet).

Covered foreign country means The People's Republic of China.

Covered telecommunications equipment or services means—

(1) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities);

(2) For the purpose of public safety, security of Government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities);

(3) Telecommunications or video surveillance services provided by such entities or using such equipment; or

(4) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

Critical technology means—

(1) Defense articles or defense services included on the United States Munitions List set forth in the International Traffic in Arms Regulations under subchapter M of chapter I of title 22, Code of Federal Regulations;

(2) Items included on the Commerce Control List set forth in Supplement No. 1 to part 774 of the Export Administration Regulations under subchapter C of chapter VII of title 15, Code of Federal Regulations, and controlled-

(i) Pursuant to multilateral regimes, including for reasons relating to national security, chemical and biological weapons proliferation, nuclear nonproliferation, or missile technology; or

(ii) For reasons relating to regional stability or surreptitious listening;

(3) Specially designed and prepared nuclear equipment, parts and components, materials, software, and technology covered by part 810 of title 10, Code of Federal Regulations (relating to assistance to foreign atomic energy activities);

(4) Nuclear facilities, equipment, and material covered by part 110 of title 10, Code of Federal Regulations (relating to export and import of nuclear equipment and material);

(5) Select agents and toxins covered by part 331 of title 7, Code of Federal Regulations, part 121 of title 9 of such Code, or part 73 of title 42 of such Code; or

(6) Emerging and foundational technologies controlled pursuant to section 1758 of the Export Control Reform Act of 2018 (50 U.S.C. 4817).

Interconnection arrangements means arrangements governing the physical connection of two or more networks to allow the use of another's network to hand off traffic where it is ultimately delivered (e.g., connection of a customer of telephone provider A to a customer of telephone company B) or sharing data and other information resources.

Reasonable inquiry means an inquiry designed to uncover any information in the entity's possession about the identity of the producer or provider of covered telecommunications equipment or services used by the entity that excludes the need to include an internal or third-party audit.

Roaming means cellular communications services (e.g., voice, video, data) received from a visited network when unable to connect to the facilities of the home network either because signal coverage is too weak or because traffic is too high.

Substantial or essential component means any component necessary for the proper function or performance of a piece of equipment, system, or service.

(b) Prohibition. (1) Section 889(a)(1)(A) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2019, from procuring or obtaining, or extending or renewing a contract to procure or obtain, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. The Contractor is prohibited from providing to the Government any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless an exception at paragraph (c) of this clause applies or the covered telecommunication equipment or services are covered by a waiver described in FAR 4.2104.

(2) Section 889(a)(1)(B) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2020, from entering into a contract, or extending or renewing a contract, with an entity that uses any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless an exception at paragraph (c) of this clause applies or the covered telecommunication equipment or services are covered by a waiver described in FAR 4.2104. This prohibition applies to the use of covered telecommunications equipment or services, regardless of whether that use is in performance of work under a Federal contract.

(c) *Exceptions.* This clause does not prohibit contractors from providing—

(1) A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or

(2) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(d) Reporting requirement.

(1) In the event the Contractor identifies covered telecommunications equipment or services used as a substantial or essential component of any system, or as critical technology as part of any system, during contract performance, or the Contractor is notified of such by a subcontractor at any tier or by any other source, the Contractor shall report the information in paragraph (d)(2) of this clause to the Contracting Officer, unless elsewhere in this contract are established procedures for reporting the information; in the case of the Department of Defense, the Contractor shall report to the website at <https://dibnet.dod.mil>. For indefinite delivery contracts, the Contractor shall report to the Contracting Officer for the indefinite delivery contract and the Contracting Officer(s) for any affected order or, in the case of the Department of Defense, identify both the indefinite delivery contract and any affected orders in the report provided at <https://dibnet.dod.mil>.


(2) The Contractor shall report the following information pursuant to paragraph (d)(1) of this clause

(i) Within one business day from the date of such identification or notification: the contract number; the order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.

(ii) Within 10 business days of submitting the information in paragraph (d)(2)(i) of this clause: any further available information about mitigation actions undertaken or recommended. In addition, the Contractor shall describe the efforts it undertook to prevent use or submission of covered telecommunications equipment or services, and any additional efforts that will be incorporated to prevent future use or submission of covered telecommunications equipment or services.

(e) *Subcontracts*. The Contractor shall insert the substance of this clause, including this paragraph (e) and excluding paragraph (b)(2), in all subcontracts and other contractual instruments, including subcontracts for the acquisition of commercial items.

(End of clause)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE OF PAGES	
						1 8	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00005		See Block 16C		PR-OCSP-21-00156			
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
CAD							
US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x) 9A. AMENDMENT OF SOLICITATION NO.			
Battelle Memorial Institute Attn: Kelly Landolfi 505 KING AVE COLUMBUS OH 432012696							
				9B. DATED (SEE ITEM 11)			
				x 10A. MODIFICATION OF CONTRACT/ORDER NO.			
				68HE0H18D0009			
				68HERH19F0400			
				10B. DATED (SEE ITEM 13)			
				09/25/2019			
CODE 007901598		FACILITY CODE					
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)				Net Increase:		\$225,815.00	
See Schedule							
13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
X	D. OTHER (Specify type of modification and authority) IAW Local Clause EPA-B-32-103, Limitation of Government's Obligation						
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 007901598 ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task Order: Technical Support for Data Analysis and Management and Linear Systematic Literature Reviews TOCOR: Kristan Markey Max Expire Date: 09/27/2023 Invoice Approver: Kristan Markey Alt Invoice App: Scott Lynn This unilateral Modification P00005 is issued, as detailed on pages 3 through 8 of this document, to incrementally fund Contract Line Item Number (CLIN) 0002 (Option Period 1) in the amount of \$225,815.00.							
All other terms and conditions remain unchanged and in full force and effect.							
Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Sean Gifford			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				 (Signature of Contracting Officer)		ELECTRONIC SIGNATURE 03/16/2021	

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	68HE0H18D0009/68HERH19F0400/P00005	2	8

NAME OF OFFEROR OR CONTRACTOR
Battelle Memorial Institute

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>LIST OF CHANGES:</p> <p>Reason for Modification: Funding Only Action</p> <p>Obligated Amount for this Modification: \$225,815.00</p> <p>New Total Obligated Amount for this Award: \$1,640,885.00</p> <p>Incremental Funded Amount changed from \$339,636.00 to \$565,451.00</p> <p>CHANGES FOR LINE ITEM NUMBER: 0002</p> <p>Obligated Amount for this Modification: \$225,815.00</p> <p>Incremental Funded Amount changed from \$335,058.00 to \$560,873.00</p> <p>NEW ACCOUNTING CODE ADDED:</p> <p>Account code: 21-22-B-32D-000C54-2505-2132IO0035-001</p> <p>Beginning FiscalYear 21</p> <p>Ending Fiscal Year 22</p> <p>Fund (Appropriation) B</p> <p>Budget Organization 32D</p> <p>Program (PRC) 000C54</p> <p>Budget (BOC) 2505</p> <p>Job # (Site/Project)</p> <p>Cost Organization</p> <p>DCN-LineID 2132IO0035-001</p> <p>Quantity: 0</p> <p>Amount: \$225,815.00</p> <p>Percent: 35.44515</p> <p>Subject To Funding: N</p> <p>Payment Address:</p> <p>RTP Finance Center</p> <p>US Environmental Protection Agency</p> <p>RTP-Finance Center (AA216-01)</p> <p>109 TW Alexander Drive</p> <p>www2.epa.gov/financial/contracts</p> <p>Durham NC 27711</p> <p>Payment:</p> <p>RTP Finance Center</p> <p>US Environmental Protection Agency</p> <p>RTP-Finance Center (AA216-01)</p> <p>109 TW Alexander Drive</p> <p>www2.epa.gov/financial/contracts</p> <p>Durham NC 27711</p> <p>Period of Performance: 09/25/2019 to 09/24/2021</p>				

**ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task
Order: Technical Support for Data Analysis and Management and Linear
Systematic Literature Reviews**

Contract: 68HE0H18D0009, Task Order: 68HERH19F0400, Modification P00005

Procurement Management Roles

Contract-Level Contracting Officer's Representative (CLCOR):

Cathy Stewart
U.S. EPA
2777 S Crystal Drive
Mail Code: 7502P
Arlington, VA 22202
Phone: 703-305-7711
Email: Stewart.Cathy@epa.gov

Alternate CLCOR:

LaTangila Edwards
U.S. EPA
2777 S Crystal Drive
Mail Code: 7509P
Arlington, VA 22202
Phone: 703-305-7170
Email: Edwards.Latangila@epa.gov

Task Order Contracting Officer's Representative (TOCOR):

Kristan Markey
U.S. EPA
1201 Constitution Ave NW
Mail Code: 7203M
Washington, DC 20004
Phone: 202-564-8716
Email: Markey.Kristan@epa.gov

Alternate TOCOR:

Scott Lynn
U.S. EPA
1201 Constitution Ave NW
Mail Code: 4106L
Washington, DC 20004
Phone: 202-564-2631
Email: Lynn.Scott@epa.gov

Administrative Contracting Officer (ACO):

Sean Gifford
U.S. EPA
26 West Martin Luther King Drive
Mail Code: W136A
Cincinnati, OH 45268
Phone: 513-487-2506
Email: Gifford.Sean@epa.gov

I. Purpose of Modification:

The purpose of Modification P00005 to this task order is to incrementally fund Contract Line Item Number (CLIN) 0002 (Option Period 1) in the amount of \$225,815.00.

All other terms and conditions remain unchanged and in full force and effect.

**ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task
Order: Technical Support for Data Analysis and Management and Linear
Systematic Literature Reviews**

Contract: 68HE0H18D0009, Task Order: 68HERH19F0400, Modification P00005

II. Limitation of Government's Obligation - EPA Clause EPA-B-32-103:

- (a) Severable services may be incrementally funded. Non-severable services shall not be incrementally funded. Contract line items **0001 through 0032** are severable and may be incrementally funded. For these items, the sum of **\$1,640,885.00 (detailed below)** of the total price is presently available for payment and allotted to this contract.
- (b) For items identified in paragraph (a) of this clause, the Contractor agrees to perform up to the point at which the total amount payable by the Government, including reimbursement in the event of termination of those items for the Government's convenience, approximates the total amount currently allotted for those items to the contract. The Contractor shall not continue work on those items beyond that point. Subject to the clause entitled "Termination for Convenience of the Government," the Government will not be obligated, under any circumstances, to reimburse the Contractor in excess of the amount payable by the Government in the event of the termination of applicable contract line items for convenience including costs, profit, and estimated termination costs for those line items.
- (c) Notwithstanding the dates specified in the allotment schedule in paragraph (h) of this clause, the Contractor will notify the Contracting Officer, in writing, at least **15 days** prior to the date when, in the Contractor's best judgment, the work will reach the point at which the total amount payable by the Government, including any cost for termination for convenience, will approximate **75 percent** of the total amount currently allotted to the contract for performance of the applicable items. The notification will state (1) the estimated date when that point will be reached and (2) an estimate of additional funding, if any, needed to continue performance of the applicable line items up to the next scheduled date for the allotment of funds identified in paragraph (a) of this clause, or to a substitute date as determined by the Government pursuant to paragraph (d) of this clause. If, after such notification, additional funds are not allotted by the date identified in the Contractor's notification, or by an agreed substitute date, the Contracting Officer will terminate any item(s) for which additional funds have not been allotted, pursuant to the clause entitled "Termination for Convenience of the Government."
- (d) The parties contemplate that, subject to the availability of appropriations, the Government may allot additional funds for continued performance of the contract line items identified in paragraph (a) of this clause and will determine the estimated period of contract performance which will be covered by the funds. If additional funds are allotted, the Contracting Officer will notify the Contractor in writing. The Contractor shall not resume performance of the contract line items identified in paragraph (a) until the written notice is received. The provisions of paragraphs (b) through (d) of this clause will apply in like manner to the additional allotted funds and to the new estimated period of contract performance. The contract will be modified accordingly.

**ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task
Order: Technical Support for Data Analysis and Management and Linear
Systematic Literature Reviews**

Contract: 68HE0H18D0009, Task Order: 68HERH19F0400, Modification P00005

- (e) The Government may, at any time prior to termination, allot additional funds for the performance of the contract line items identified in paragraph (a) of this clause.
- (f) The termination provisions of this clause do not limit the rights of the Government under the clause entitled "Default". The provisions of this clause are limited to the work and allotment of funds for the contract line items set forth in paragraph (a) of this clause. This clause no longer applies once the contract is fully funded.
- (g) Nothing in this clause affects the right of the Government to otherwise terminate this contract pursuant to the contract clause entitled "Termination for Convenience of the Government".
- (h) The parties contemplate that the Government may obligate funds to this contract in accordance with the following schedule:

**Funding is typically provided covering two months at a time. These amounts may vary, however, higher or lower.

Recapitulation of Pricing

Line Item Pricing for Base Period	
Line Item 0001	\$617,436.00
Line Item 0005	\$4,558.00
Line Item 0006	\$2,453.00
Line Item 0007	\$4,558.00
Line Item 0008	\$2,453.00
Line Item 0009	\$2,935.00
Line Item 0010	\$1,643.00
Line Item 0011	\$218,161.00
Total Price for the Base Period:	\$854,197.00

Line Item Pricing for Option Period 1	
Line Item 0002	\$637,083.00
Line Item 0012	\$4,697.00
Line Item 0013	\$2,530.00
Line Item 0014	\$4,697.00
Line Item 0015	\$2,530.00
Line Item 0016	\$3,040.00
Line Item 0017	\$1,703.00
Line Item 0018	\$225,815.00
Total Price for Option Period 1:	\$882,095.00

Line Item Pricing for Option Period 2	
Line Item 0003	\$659,554.00
Line Item 0019	\$4,843.00
Line Item 0020	\$2,610.00
Line Item 0021	\$4,843.00
Line Item 0022	\$2,610.00
Line Item 0023	\$3,153.00
Line Item 0024	\$1,765.00
Line Item 0025	\$234,289.00
Total Price for Option Period 2:	\$913,667.00

**ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task
Order: Technical Support for Data Analysis and Management and Linear
Systematic Literature Reviews**

Contract: 68HE0H18D0009, Task Order: 68HERH19F0400, Modification P00005

Line Item Pricing for Option Period 3

Line Item 0004	\$679,388.00
Line Item 0026	\$4,980.00
Line Item 0027	\$2,685.00
Line Item 0028	\$4,980.00
Line Item 0029	\$2,685.00
Line Item 0030	\$3,252.00
Line Item 0031	\$1,822.00
Line Item 0032	\$241,623.00
Total Price for Option Period 3:	\$941,415.00

Total Price for All Periods:	\$3,591,374.00
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Funding for Period of Performance

Funded at Task Order Award

Line Item 0001	\$617,436.00
Line Item 0005	\$4,558.00
Line Item 0006	\$2,453.00
Line Item 0007	\$4,558.00
Line Item 0008	\$2,453.00
Line Item 0009	\$2,935.00
Line Item 0010	\$1,643.00
Line Item 0011	\$218,161.00
Total Funded at Task Order Award:	\$854,197.00

Funded via Modification P00003

Line Item 0002	\$335,058.00
Line Item 0012	\$0.00
Line Item 0013	\$0.00
Line Item 0014	\$0.00
Line Item 0015	\$0.00
Line Item 0016	\$0.00
Line Item 0017	\$0.00
Line Item 0018	\$225,815.00
Total Funded via Modification P00003:	\$560,873.00

Funded via Modification P00005

Line Item 0002	\$225,815.00
Line Item 0012	\$0.00
Line Item 0013	\$0.00
Line Item 0014	\$0.00
Line Item 0015	\$0.00
Line Item 0016	\$0.00
Line Item 0017	\$0.00
Line Item 0018	\$0.00
Total Funded via Modification P00005:	\$225,815.00

Total Funding by Period of Performance

Funded for the Base Period

Line Item 0001	\$617,436.00
Line Item 0005	\$4,558.00
Line Item 0006	\$2,453.00
Line Item 0007	\$4,558.00
Line Item 0008	\$2,453.00

**ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task
Order: Technical Support for Data Analysis and Management and Linear
Systematic Literature Reviews**

Contract: 68HE0H18D0009, Task Order: 68HERH19F0400, Modification P00005

Line Item 0009	\$2,935.00
Line Item 0010	\$1,643.00
Line Item 0011	<u>\$218,161.00</u>
Total Funded for the Base Period:	\$854,197.00

Funded for Option Period 1	
Line Item 0002	\$560,873.00
Line Item 0012	\$0.00
Line Item 0013	\$0.00
Line Item 0014	\$0.00
Line Item 0015	\$0.00
Line Item 0016	\$0.00
Line Item 0017	\$0.00
Line Item 0018	<u>\$225,815.00</u>
Total Funded for Option Period 1:	\$786,688.00

Funded for Option Period 2	
Line Item 0003	\$0.00
Line Item 0019	\$0.00
Line Item 0020	\$0.00
Line Item 0021	\$0.00
Line Item 0022	\$0.00
Line Item 0023	\$0.00
Line Item 0024	\$0.00
Line Item 0025	<u>\$0.00</u>
Total Funded for Option Period 2:	\$0.00

Funded for Option Period 3	
Line Item 0004	\$0.00
Line Item 0026	\$0.00
Line Item 0027	\$0.00
Line Item 0028	\$0.00
Line Item 0029	\$0.00
Line Item 0030	\$0.00
Line Item 0031	\$0.00
Line Item 0032	<u>\$0.00</u>
Total Funded for Option Period 3:	\$0.00

Balance to be Funded by Program Office

Line Item 0001	\$0.00
Line Item 0002	\$76,210.00
Line Item 0003	\$659,554.00
Line Item 0004	\$679,388.00
Line Item 0005	\$0.00
Line Item 0006	\$0.00
Line Item 0007	\$0.00
Line Item 0008	\$0.00
Line Item 0009	\$0.00
Line Item 0010	\$0.00
Line Item 0011	\$0.00
Line Item 0012	\$4,697.00
Line Item 0013	\$2,530.00
Line Item 0014	\$4,697.00
Line Item 0015	\$2,530.00

**ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task
Order: Technical Support for Data Analysis and Management and Linear
Systematic Literature Reviews**

Contract: 68HE0H18D0009, Task Order: 68HERH19F0400, Modification P00005

Line Item 0016	\$3,040.00
Line Item 0017	\$1,703.00
Line Item 0018	\$0.00
Line Item 0019	\$4,843.00
Line Item 0020	\$2,610.00
Line Item 0021	\$4,843.00
Line Item 0022	\$2,610.00
Line Item 0023	\$3,153.00
Line Item 0024	\$1,765.00
Line Item 0025	\$234,289.00
Line Item 0026	\$4,980.00
Line Item 0027	\$2,685.00
Line Item 0028	\$4,980.00
Line Item 0029	\$2,685.00
Line Item 0030	\$3,252.00
Line Item 0031	\$1,822.00
Line Item 0032	\$241,623.00
Total Balance to be Funded by Program Office:	\$1,855,082.00
Total Task Order Amount (w/ options):	\$3,591,374.00
Total Task Order Amount (w/o options):	\$1,736,292.00
Total Funded Amount:	\$1,640,885.00

END OF DOCUMENT

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE OF PAGES	
						1 12	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00006		See Block 16C		PR-OCSP-21-00289			
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
CAD							
CAD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: W136 Cincinnati OH 45268-0001							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x) 9A. AMENDMENT OF SOLICITATION NO.			
Battelle Memorial Institute Attn: Kelly Landolfi 505 KING AVE COLUMBUS OH 432012696				9B. DATED (SEE ITEM 11)			
				x 10A. MODIFICATION OF CONTRACT/ORDER NO.			
				68HE0H18D0009			
				68HERH19F0400			
				10B. DATED (SEE ITEM 13)			
CODE 007901598				FACILITY CODE			
				09/25/2019			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)				Net Increase:		\$95,407.00	
See Schedule							
13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
X	D. OTHER (Specify type of modification and authority) IAW Local Clause EPA-B-32-103, Limitation of Government's Obligation						
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 007901598 ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task Order: Technical Support for Data Analysis and Management and Linear Systematic Literature Reviews TOCOR: Kristan Markey Max Expire Date: 09/27/2023 Invoice Approver: Kristan Markey Alt Invoice App: Scott Lynn This unilateral Modification P00006 is issued, as detailed on pages 7 through 12 of this document, to incrementally fund Option Period 1 associated Contract Line Item Numbers (CLINs) 0002, 0012, 0013, 0014, 0015, 0016, and 0017, for a total amount of \$95,407.00. All Option Period 1 CLINs are now fully funded.							
All other terms and conditions remain unchanged and in full force and effect.							
Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Sean Gifford			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				 (Signature of Contracting Officer)		ELECTRONIC SIGNATURE 05/24/2021	

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED 68HE0H18D0009/68HERH19F0400/P00006	PAGE	OF
		2	12

NAME OF OFFEROR OR CONTRACTOR
Battelle Memorial Institute

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>LIST OF CHANGES:</p> <p>Reason for Modification: Funding Only Action</p> <p>Obligated Amount for this Modification: \$95,407.00</p> <p>New Total Obligated Amount for this Award:</p> <p>\$1,736,292.00</p> <p>Incremental Funded Amount changed from</p> <p>\$565,451.00 to \$660,858.00</p> <p>CHANGES FOR LINE ITEM NUMBER: 0002</p> <p>Obligated Amount for this Modification: \$76,210.00</p> <p>Incremental Funded Amount changed from</p> <p>\$560,873.00 to \$637,083.00</p> <p>NEW ACCOUNTING CODE ADDED:</p> <p>Account code:</p> <p>21-22-B-32D-000C54-2505-2132IO0042-001</p> <p>Beginning FiscalYear 21</p> <p>Ending Fiscal Year 22</p> <p>Fund (Appropriation) B</p> <p>Budget Organization 32D</p> <p>Program (PRC) 000C54</p> <p>Budget (BOC) 2505</p> <p>Job # (Site/Project)</p> <p>Cost Organization</p> <p>DCN-LineID 2132IO0042-001</p> <p>Quantity: 0</p> <p>Amount: \$76,210.00</p> <p>Percent: 0</p> <p>Subject To Funding: N</p> <p>Payment Address:</p> <p>RTP Finance Center</p> <p>US Environmental Protection Agency</p> <p>RTP-Finance Center (AA216-01)</p> <p>109 TW Alexander Drive</p> <p>www2.epa.gov/financial/contracts</p> <p>Durham NC 27711</p> <p>CHANGES FOR LINE ITEM NUMBER: 0012</p> <p>Obligated Amount for this Modification: \$4,697.00</p> <p>Incremental Funded Amount changed from \$0.00 to</p> <p>\$4,697.00</p> <p>NEW ACCOUNTING CODE ADDED:</p> <p>Account code:</p> <p>21-22-B-32D-000C54-2505-2132IO0042-001</p> <p>Beginning FiscalYear 21</p> <p>Ending Fiscal Year 22</p> <p>Fund (Appropriation) B</p> <p>Continued ...</p>				

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED 68HE0H18D0009/68HERH19F0400/P00006	PAGE	OF
		3	12

NAME OF OFFEROR OR CONTRACTOR
Battelle Memorial Institute

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Budget Organization 32D Program (PRC) 000C54 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 2132IO0042-001 Quantity: 0 Amount: \$4,697.00 Percent: 0 Subject To Funding: N Payment Address: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 CHANGES FOR LINE ITEM NUMBER: 0013 Obligated Amount for this Modification: \$2,530.00 Incremental Funded Amount changed from \$0.00 to \$2,530.00 NEW ACCOUNTING CODE ADDED: Account code: 21-22-B-32D-000C54-2505-2132IO0042-001 Beginning FiscalYear 21 Ending Fiscal Year 22 Fund (Appropriation) B Budget Organization 32D Program (PRC) 000C54 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 2132IO0042-001 Quantity: 0 Amount: \$2,530.00 Percent: 0 Subject To Funding: N Payment Address: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 CHANGES FOR LINE ITEM NUMBER: 0014 Obligated Amount for this Modification: \$4,697.00 Incremental Funded Amount changed from \$0.00 to Continued ...				

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	68HE0H18D0009/68HERH19F0400/P00006	4	12

NAME OF OFFEROR OR CONTRACTOR
Battelle Memorial Institute

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>\$4,697.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 21-22-B-32D-000C54-2505-2132IO0042-001 Beginning FiscalYear 21 Ending Fiscal Year 22 Fund (Appropriation) B Budget Organization 32D Program (PRC) 000C54 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 2132IO0042-001 Quantity: 0 Amount: \$4,697.00 Percent: 0 Subject To Funding: N Payment Address: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711</p> <p>CHANGES FOR LINE ITEM NUMBER: 0015 Obligated Amount for this Modification: \$2,530.00 Incremental Funded Amount changed from \$0.00 to \$2,530.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 21-22-B-32D-000C54-2505-2132IO0042-001 Beginning FiscalYear 21 Ending Fiscal Year 22 Fund (Appropriation) B Budget Organization 32D Program (PRC) 000C54 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 2132IO0042-001 Quantity: 0 Amount: \$2,530.00 Percent: 0 Subject To Funding: N Payment Address: RTP Finance Center US Environmental Protection Agency Continued ...</p>				

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED 68HE0H18D0009/68HERH19F0400/P00006	PAGE	OF
		5	12

NAME OF OFFEROR OR CONTRACTOR
Battelle Memorial Institute

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 CHANGES FOR LINE ITEM NUMBER: 0016 Obligated Amount for this Modification: \$3,040.00 Incremental Funded Amount changed from \$0.00 to \$3,040.00 NEW ACCOUNTING CODE ADDED: Account code: 21-22-B-32D-000C54-2505-2132IO0042-001 Beginning FiscalYear 21 Ending Fiscal Year 22 Fund (Appropriation) B Budget Organization 32D Program (PRC) 000C54 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 2132IO0042-001 Quantity: 0 Amount: \$3,040.00 Percent: 0 Subject To Funding: N Payment Address: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 CHANGES FOR LINE ITEM NUMBER: 0017 Obligated Amount for this Modification: \$1,703.00 Incremental Funded Amount changed from \$0.00 to \$1,703.00 NEW ACCOUNTING CODE ADDED: Account code: 21-22-B-32D-000C54-2505-2132IO0042-001 Beginning FiscalYear 21 Ending Fiscal Year 22 Fund (Appropriation) B Budget Organization 32D Program (PRC) 000C54 Budget (BOC) 2505 Job # (Site/Project) Cost Organization Continued ...				

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED 68HE0H18D0009/68HERH19F0400/P00006	PAGE	OF
		6	12

NAME OF OFFEROR OR CONTRACTOR
Battelle Memorial Institute

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	DCN-LineID 2132IO0042-001 Quantity: 0 Amount: \$1,703.00 Percent: 0 Subject To Funding: N Payment Address: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Period of Performance: 09/25/2019 to 09/24/2021				

**ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task
Order: Technical Support for Data Analysis and Management and Linear
Systematic Literature Reviews**

Contract: 68HE0H18D0009, Task Order: 68HERH19F0400, Modification P00006

Procurement Management Roles

Contract-Level Contracting Officer's Representative (CLCOR):

Cathy Stewart
U.S. EPA
2777 S Crystal Drive
Mail Code: 7502P
Arlington, VA 22202
Phone: 703-305-7711
Email: Stewart.Cathy@epa.gov

Alternate CLCOR:

LaTangila Edwards
U.S. EPA
2777 S Crystal Drive
Mail Code: 7509P
Arlington, VA 22202
Phone: 703-305-7170
Email: Edwards.Latangila@epa.gov

Task Order Contracting Officer's Representative (TOCOR):

Kristan Markey
U.S. EPA
1201 Constitution Ave NW
Mail Code: 7203M
Washington, DC 20004
Phone: 202-564-8716
Email: Markey.Kristan@epa.gov

Alternate TOCOR:

Scott Lynn
U.S. EPA
1201 Constitution Ave NW
Mail Code: 4106L
Washington, DC 20004
Phone: 202-564-2631
Email: Lynn.Scott@epa.gov

Administrative Contracting Officer (ACO):

Sean Gifford
U.S. EPA
26 West Martin Luther King Drive
Mail Code: W136A
Cincinnati, OH 45268
Phone: 513-487-2506
Email: Gifford.Sean@epa.gov

I. Purpose of Modification:

This unilateral Modification P00006 is issued to incrementally fund Option Period 1 associated Contract Line Item Numbers (CLINs) 0002, 0012, 0013, 0014, 0015, 0016, and 0017, as detailed below, with amounts totalling \$95,407.00. All Option Period 1 CLINs are now fully funded.

All other terms and conditions remain unchanged and in full force and effect.

**ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task
Order: Technical Support for Data Analysis and Management and Linear
Systematic Literature Reviews**

Contract: 68HE0H18D0009, Task Order: 68HERH19F0400, Modification P00006

II. Limitation of Government's Obligation - EPA Clause EPA-B-32-103:

- (a) Severable services may be incrementally funded. Non-severable services shall not be incrementally funded. Contract line items **0001 through 0032** are severable and may be incrementally funded. For these items, the sum of **\$1,640,885.00 (detailed below)** of the total price is presently available for payment and allotted to this contract.
- (b) For items identified in paragraph (a) of this clause, the Contractor agrees to perform up to the point at which the total amount payable by the Government, including reimbursement in the event of termination of those items for the Government's convenience, approximates the total amount currently allotted for those items to the contract. The Contractor shall not continue work on those items beyond that point. Subject to the clause entitled "Termination for Convenience of the Government," the Government will not be obligated, under any circumstances, to reimburse the Contractor in excess of the amount payable by the Government in the event of the termination of applicable contract line items for convenience including costs, profit, and estimated termination costs for those line items.
- (c) Notwithstanding the dates specified in the allotment schedule in paragraph (h) of this clause, the Contractor will notify the Contracting Officer, in writing, at least **15 days** prior to the date when, in the Contractor's best judgment, the work will reach the point at which the total amount payable by the Government, including any cost for termination for convenience, will approximate **75 percent** of the total amount currently allotted to the contract for performance of the applicable items. The notification will state (1) the estimated date when that point will be reached and (2) an estimate of additional funding, if any, needed to continue performance of the applicable line items up to the next scheduled date for the allotment of funds identified in paragraph (a) of this clause, or to a substitute date as determined by the Government pursuant to paragraph (d) of this clause. If, after such notification, additional funds are not allotted by the date identified in the Contractor's notification, or by an agreed substitute date, the Contracting Officer will terminate any item(s) for which additional funds have not been allotted, pursuant to the clause entitled "Termination for Convenience of the Government."
- (d) The parties contemplate that, subject to the availability of appropriations, the Government may allot additional funds for continued performance of the contract line items identified in paragraph (a) of this clause and will determine the estimated period of contract performance which will be covered by the funds. If additional funds are allotted, the Contracting Officer will notify the Contractor in writing. The Contractor shall not resume performance of the contract line items identified in paragraph (a) until the written notice is received. The provisions of paragraphs (b) through (d) of this clause will apply in like manner to the additional allotted funds and to the new estimated period of contract performance. The contract will be modified accordingly.

**ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task
Order: Technical Support for Data Analysis and Management and Linear
Systematic Literature Reviews**

Contract: 68HE0H18D0009, Task Order: 68HERH19F0400, Modification P00006

- (e) The Government may, at any time prior to termination, allot additional funds for the performance of the contract line items identified in paragraph (a) of this clause.
- (f) The termination provisions of this clause do not limit the rights of the Government under the clause entitled "Default". The provisions of this clause are limited to the work and allotment of funds for the contract line items set forth in paragraph (a) of this clause. This clause no longer applies once the contract is fully funded.
- (g) Nothing in this clause affects the right of the Government to otherwise terminate this contract pursuant to the contract clause entitled "Termination for Convenience of the Government".
- (h) The parties contemplate that the Government may obligate funds to this contract in accordance with the following schedule:

**Funding is typically provided covering two months at a time. These amounts may vary, however, higher or lower.

Recapitulation of Pricing

Line Item Pricing for Base Period	
Line Item 0001	\$617,436.00
Line Item 0005	\$4,558.00
Line Item 0006	\$2,453.00
Line Item 0007	\$4,558.00
Line Item 0008	\$2,453.00
Line Item 0009	\$2,935.00
Line Item 0010	\$1,643.00
Line Item 0011	\$218,161.00
Total Price for the Base Period:	\$854,197.00

Line Item Pricing for Option Period 1	
Line Item 0002	\$637,083.00
Line Item 0012	\$4,697.00
Line Item 0013	\$2,530.00
Line Item 0014	\$4,697.00
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Line Item 0017	\$1,703.00
Line Item 0018	\$225,815.00
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Line Item Pricing for Option Period 2	
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Line Item 0019	\$4,843.00
Line Item 0020	\$2,610.00
Line Item 0021	\$4,843.00
Line Item 0022	\$2,610.00
Line Item 0023	\$3,153.00
Line Item 0024	\$1,765.00
Line Item 0025	\$234,289.00
Total Price for Option Period 2:	\$913,667.00

**ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task
Order: Technical Support for Data Analysis and Management and Linear
Systematic Literature Reviews**

Contract: 68HE0H18D0009, Task Order: 68HERH19F0400, Modification P00006

Line Item Pricing for Option Period 3

Line Item 0004	\$679,388.00
Line Item 0026	\$4,980.00
Line Item 0027	\$2,685.00
Line Item 0028	\$4,980.00
Line Item 0029	\$2,685.00
Line Item 0030	\$3,252.00
Line Item 0031	\$1,822.00
Line Item 0032	\$241,623.00
Total Price for Option Period 3:	\$941,415.00

Total Price for All Periods:	\$3,591,374.00
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Funding for Period of Performance

Funded at Task Order Award

Line Item 0001	\$617,436.00
Line Item 0005	\$4,558.00
Line Item 0006	\$2,453.00
Line Item 0007	\$4,558.00
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Line Item 0009	\$2,935.00
Line Item 0010	\$1,643.00
Line Item 0011	\$218,161.00
Total Funded at Task Order Award:	\$854,197.00

Funded via Modification P00003

Line Item 0002	\$335,058.00
Line Item 0012	\$0.00
Line Item 0013	\$0.00
Line Item 0014	\$0.00
Line Item 0015	\$0.00
Line Item 0016	\$0.00
Line Item 0017	\$0.00
Line Item 0018	\$225,815.00
Total Funded via Modification P00003:	\$560,873.00

Funded via Modification P00005

Line Item 0002	\$225,815.00
Line Item 0012	\$0.00
Line Item 0013	\$0.00
Line Item 0014	\$0.00
Line Item 0015	\$0.00
Line Item 0016	\$0.00
Line Item 0017	\$0.00
Line Item 0018	\$0.00
Total Funded via Modification P00005:	\$225,815.00

Funded via Modification P00006

Line Item 0002	\$76,210.00
Line Item 0012	\$4,697.00
Line Item 0013	\$2,530.00
Line Item 0014	\$4,697.00
Line Item 0015	\$2,530.00
Line Item 0016	\$3,040.00

**ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task
Order: Technical Support for Data Analysis and Management and Linear
Systematic Literature Reviews**

Contract: 68HE0H18D0009, Task Order: 68HERH19F0400, Modification P00006

Line Item 0017	\$1,703.00
Line Item 0018	\$0.00
Total Funded via Modification P00006:	\$95,407.00

Total Funding by Period of Performance

Funded for the Base Period

Line Item 0001	\$617,436.00
Line Item 0005	\$4,558.00
Line Item 0006	\$2,453.00
Line Item 0007	\$4,558.00
Line Item 0008	\$2,453.00
Line Item 0009	\$2,935.00
Line Item 0010	\$1,643.00
Line Item 0011	\$218,161.00
Total Funded for the Base Period:	\$854,197.00

Funded for Option Period 1

Line Item 0002	\$637,083.00
Line Item 0012	\$4,697.00
Line Item 0013	\$2,530.00
Line Item 0014	\$4,697.00
Line Item 0015	\$2,530.00
Line Item 0016	\$3,040.00
Line Item 0017	\$1,703.00
Line Item 0018	\$225,815.00
Total Funded for Option Period 1:	\$882,095.00

Funded for Option Period 2

Line Item 0003	\$0.00
Line Item 0019	\$0.00
Line Item 0020	\$0.00
Line Item 0021	\$0.00
Line Item 0022	\$0.00
Line Item 0023	\$0.00
Line Item 0024	\$0.00
Line Item 0025	\$0.00
Total Funded for Option Period 2:	\$0.00

Funded for Option Period 3

Line Item 0004	\$0.00
Line Item 0026	\$0.00
Line Item 0027	\$0.00
Line Item 0028	\$0.00
Line Item 0029	\$0.00
Line Item 0030	\$0.00
Line Item 0031	\$0.00
Line Item 0032	\$0.00
Total Funded for Option Period 3:	\$0.00

Balance to be Funded by Program Office

Line Item 0001	\$0.00
Line Item 0002	\$0.00
Line Item 0003	\$659,554.00
Line Item 0004	\$679,388.00

**ID/IQ Technical Support for the Endocrine Disruptor Screening Program Task
Order: Technical Support for Data Analysis and Management and Linear
Systematic Literature Reviews**

Contract: 68HE0H18D0009, Task Order: 68HERH19F0400, Modification P00006

Line Item 0005	\$0.00
Line Item 0006	\$0.00
Line Item 0007	\$0.00
Line Item 0008	\$0.00
Line Item 0009	\$0.00
Line Item 0010	\$0.00
Line Item 0011	\$0.00
Line Item 0012	\$0.00
Line Item 0013	\$0.00
Line Item 0014	\$0.00
Line Item 0015	\$0.00
Line Item 0016	\$0.00
Line Item 0017	\$0.00
Line Item 0018	\$0.00
Line Item 0019	\$4,843.00
Line Item 0020	\$2,610.00
Line Item 0021	\$4,843.00
Line Item 0022	\$2,610.00
Line Item 0023	\$3,153.00
Line Item 0024	\$1,765.00
Line Item 0025	\$234,289.00
Line Item 0026	\$4,980.00
Line Item 0027	\$2,685.00
Line Item 0028	\$4,980.00
Line Item 0029	\$2,685.00
Line Item 0030	\$3,252.00
Line Item 0031	\$1,822.00
Line Item 0032	\$241,623.00
Total Balance to be Funded by Program Office:	\$1,855,082.00
Total Task Order Amount (w/ options):	\$3,591,374.00
Total Task Order Amount (w/o options):	\$1,736,292.00
Total Funded Amount:	\$1,736,292.00

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